STEREO CASSETTE RECEIVER

KRC-640/650

SERVICE MANUAL

KENWOOD

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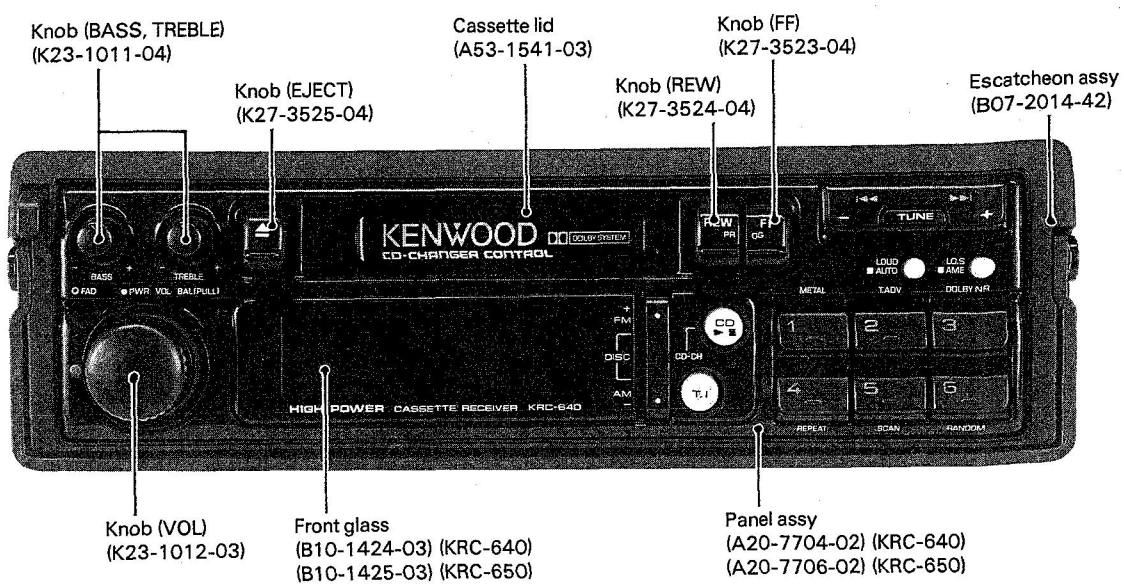
B51-6393-00(B)2164



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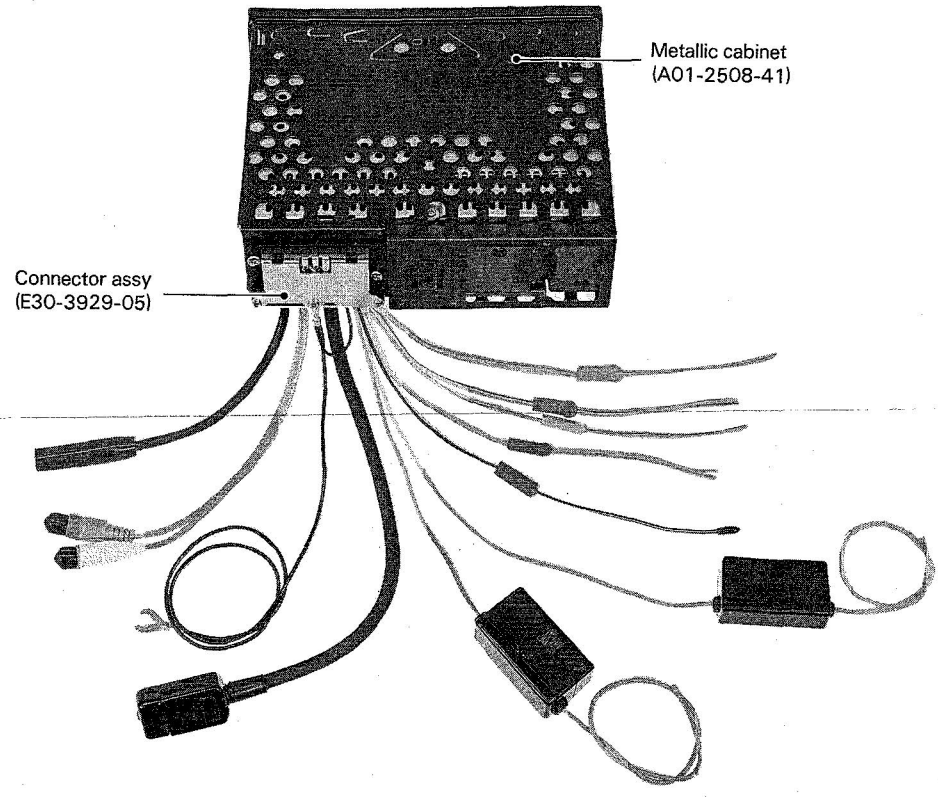

• Channel space selection

Of this unit, the channel space is selectable between FM 200 kHz/AM 10 kHz and FM 50 kHz/AM 9 kHz owing to the following operation:

While pressing preset station switches ❶ and ❺ at the same time, set the power switch to ON.

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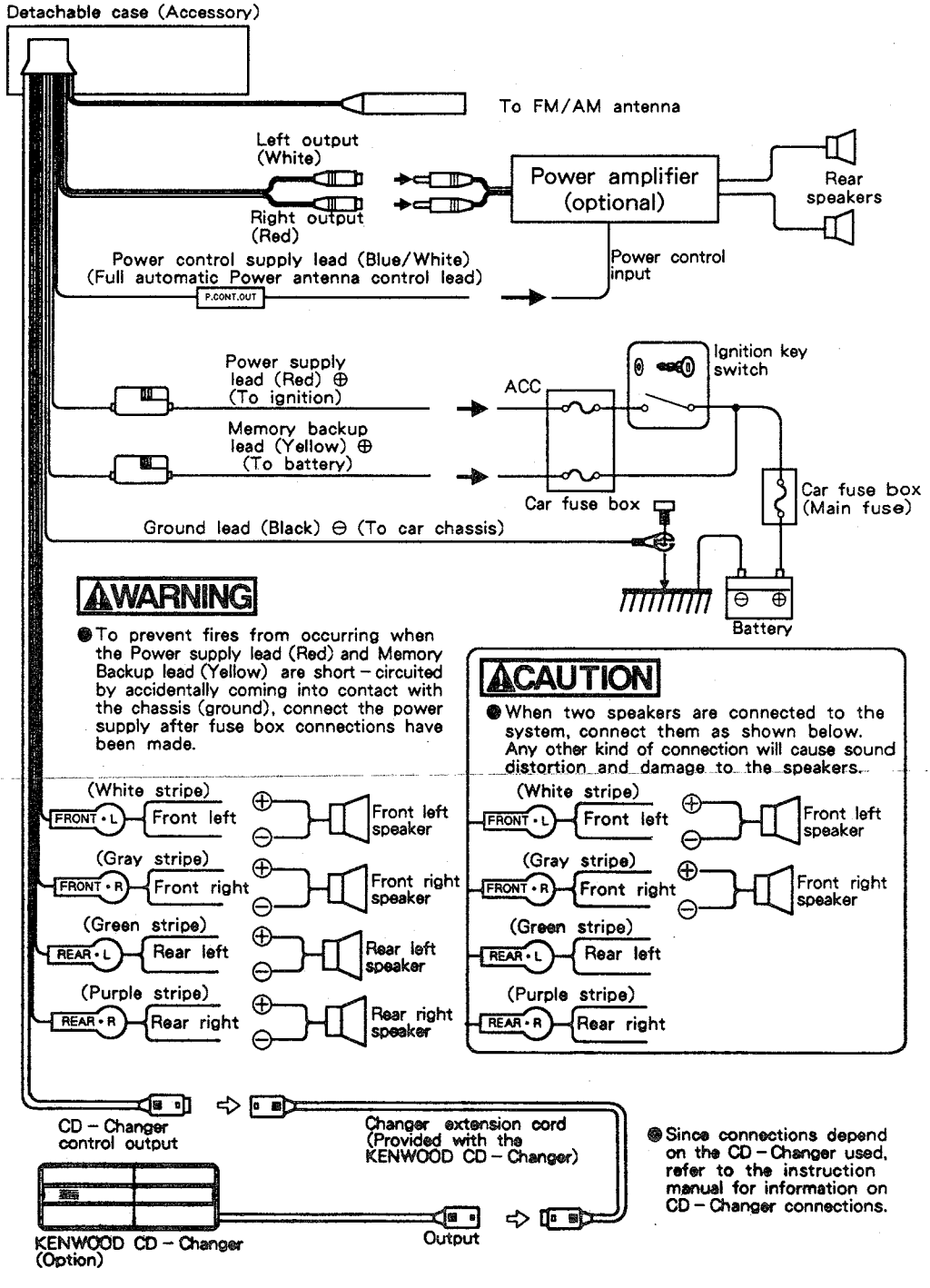
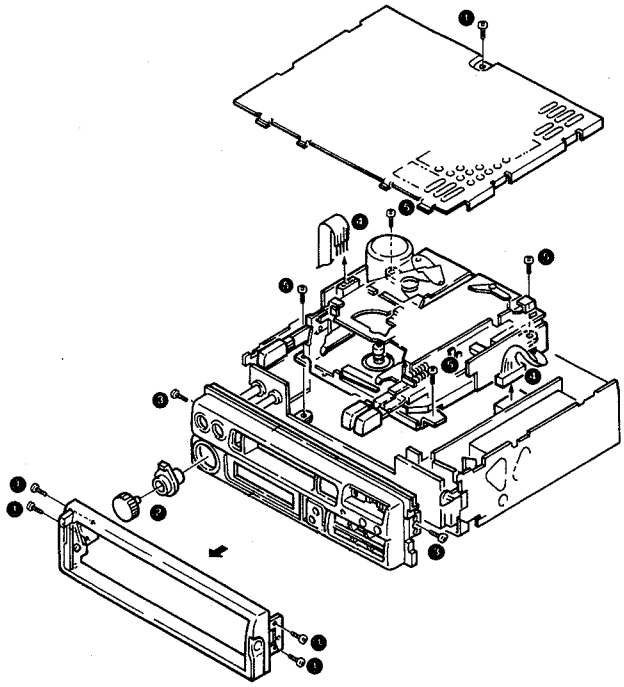
CONNECTIONS

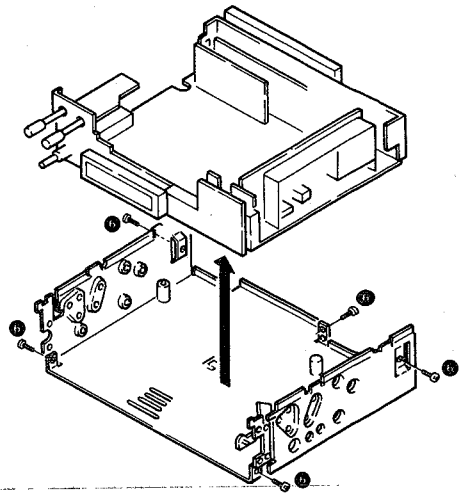

Detachable case (Accessory)
To FM/AM antenna
Left output (White)
Right output (Red)
Power amplifier (optional)
Rear speakers
Power control input
Power control supply lead (Blue/White)
(Full automatic Power antenna control lead)
P.CONT.OUT
Power supply lead (Red) ⊕ (To ignition)
Memory backup lead (Yellow) ⊕ (To battery)
ACC
Ignition key switch
Car fuse box
Car fuse box (Main fuse)
Ground lead (Black) ⊖ (To car chassis)
Battery
WARNING
To prevent fires from occurring when the Power supply lead (Red) and Memory Backup lead (Yellow) are short-circuited by accidentally coming into contact with the chassis (ground), connect the power supply after fuse box connections have been made.
CAUTION
When two speakers are connected to the system, connect them as shown below. Any other kind of connection will cause sound distortion and damage to the speakers.
(White stripe)
FRONT • L
Front left
Front left speaker
(Gray stripe)
FRONT • R
Front right
Front right speaker
(Green stripe)
REAR • L
Rear left
Rear left speaker
(Purple stripe)
REAR • R
Rear right
Rear right speaker
CD-Changer control output
Changer extension cord (Provided with the KENWOOD CD-Changer)
KENWOOD CD-Changer (Option)
Output
Since connections depend on the CD-Changer used, refer to the instruction manual for information on CD-Changer connections.

DISASSEMBLY FOR REPAIR

1. Remove the 6 screws (❶), then remove the top panel and the escutcheon ass'y.
2. Pull out the VOL and FAD control knobs (❷).
3. Remove the 2 screws (❸), and take out the panel ass'y.
4. Disconnect the 2 connectors (❹).
5. Remove the 4 screws (❺), and take out the mechanism ass'y.

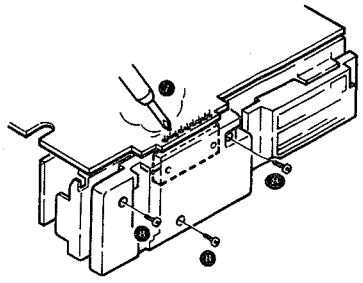


6. Remove the 6 screws (❻), and take out the whole of the circuit board.



To remove the power ass'y:

7. Remove solder from the power IC (❼).
8. Remove the 3 screws (❽).
9. Take out the power IC together with the heat-sink, then separate the power IC from the heat-sink.



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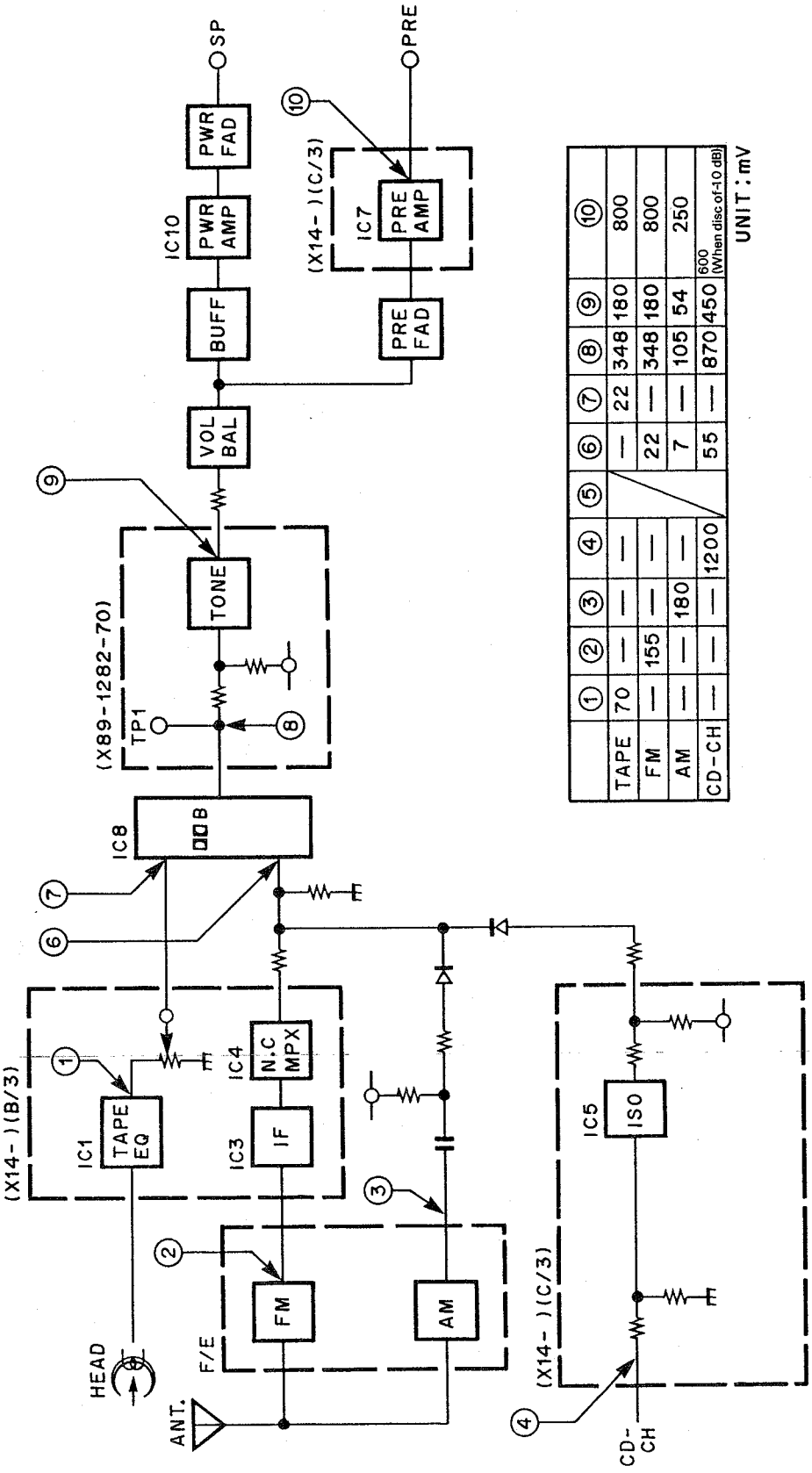
BLOCK DIAGRAM



UNIT : mV

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
TAPE	70	—	—	—		—	22	348	180	800
FM	—	155	—	—		22	—	348	180	800
AM	—	—	180	—		7	—	105	54	250
CD-CH	—	—	—	1200		55	—	870	450	600 (When disc of -10 dB)

CIRCUIT DESCRIPTION

Terminal descriptions
SYNTHESIZER UNIT (X14-3470-12)

Ref. No.	Components	Use/Function	Operation/Condition/Compatibility
IC1	BA3424F	TAPE EQ AMP	
IC2	AN6262N	TAPE ADV	Detection of spaces between tunes on tape, and plunger control.
IC3	LA1140-K	FM IF AMP	FM IF signal amp.
IC4	AN7465K	FM MPX N.C	Demodulator, noise canceler.
IC5	M5280FP	ISOLATION AMP	CD-CH and AUX (J type) isolation amp.
IC6	NJM4565MD	1/2 V_{CC} BUFF	Buffers the voltage generated by Zener D and resistance division, and supplies voltage as 1/2 V_{CC} for the tone amp and preamp.
IC7	NTM4565MD	PRE AMP	
IC8	HA1213AF	DOLBY B Type	Signal switching between TAPE and other sources (Tuner, CD-CH, etc.), signal amplification, and Dolby B encording.
IC10	TA8215H	PWR AMP	
IC11	BA3906-V1	AVR	Supplies of V_{DD}, CE, COM 9V, FM 9V and AM 9V. MUTE output.
IC12	1723GF-553-3BE	μ-COM	Key control, other controls, PLL, LCD drive.
IC13	TC4081BF	AND Gate	For use with μ-COM key matrix (alternate SW).
Q1	2SB822F	Plunger Driver	Drives the plunger based on the spaces between tunes detected by IC2.
Q2	DTC144EK	T-ADV SW	OFF during FF while T-ADV is ON.
Q3	2SC2413K	FM IF AMP	Amplifies IF signal from F/E.
Q4	2SC2412K	SD BUFF	
Q5	2SC2412K	CRSC Driver	
Q6	2SC2412K	ANRC BUFF	
Q7	DTC144EK	AFC SW	OFF during seek, ON during receive.
Q10, 11	DTC144EK	FM/AM SIG. INHIBITOR	
Q12	DTC144EK	SIG. SW	ON in CD-CH and AUX modes.
Q13, 14	DTC144EK	EXT. INPUT SIG. INH.	
Q17, 18	2SD1757K	LOUD CON SW	
Q19, 20	2SD1757K	AUDIO MUTE	
Q21, 22	2SK433	PWR AMP INPUT BUFF	
Q23	DTC144EK	PWR AMP STBY SW	
Q24	DTC144EK	FM LO/DX SW	
Q27	DTA144EK	AM AGC CUT SW	
Q29	DTC144EK	SD INV	
Q30~32	2SC2412K		
Q34	DTA114EK	PWR ON 5V SW	
Q35	DTC114EK		
Q36	DTA144EK	ACC DETECT	
Q37	2SB1370	ILLUMINATION AVR	10.4 V (Darlington)
Q38	2SC2412K		
Q39	DTA144EK	MANUAL RST	
Q40, 41	DTC144EK	LOCAL INH.	

CIRCUIT DESCRIPTION

Ref. No.	Components	Use/Function	Operation/Condition/Compatibility
Q42	DTC144EK	TAPE MUTE INH.	
Q43	DTC144EK	PACK IN INV.	
Q44	DTC144EK	AUDIO MUTE INV.	
Q46	2SA1037K	Audio Mute Driver	ON in MUTE mode to drive Q19 and Q20.
Q47	2SA1037K	LOUD SW Driver	ON in LOUD mode to drive A17 and Q18.
Q49	DTC144EK	Mute SW	
Q51~53	2SC2412K	PLL L.P.F	FM/AM Vt LPF.
Q54	2SC2412K	MECHANISM MUTE SW	MUTE in FF, REW and PROG modes.
Q55	DTA144EK		
Q56	DTC144EK	MOTOR Drive SW	
Q57	2SA1428 (O, Y)	MOTOR Driver	

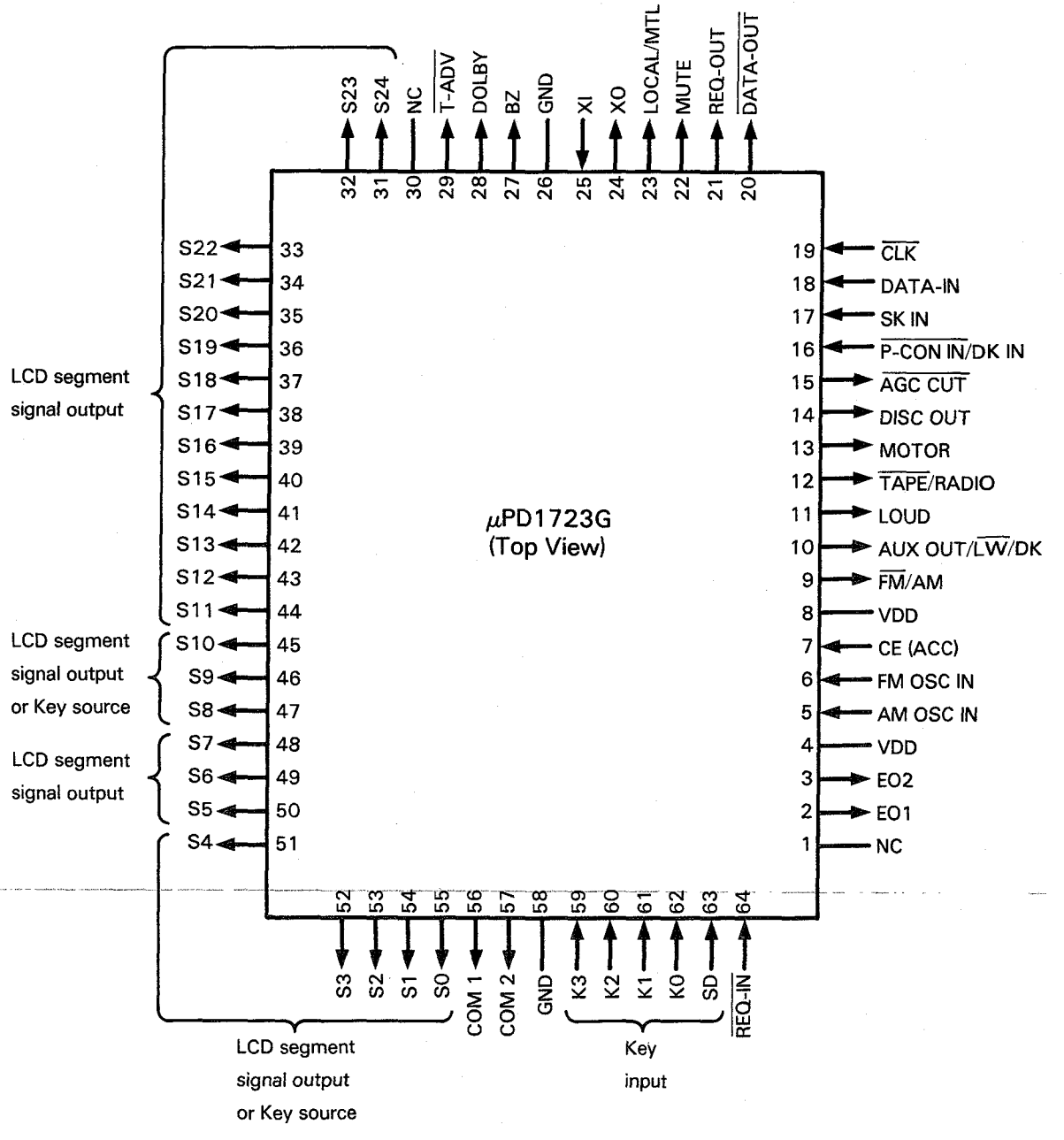
DAUGHTER UNIT (X89-1282-70)

Ref. No.	Components	Use/Function	Operation/Condition/Compatibility
IC1	TC74HC04AF	CD-CH I/O	Buffer for data communications with I/O box in CD-CH mode.
IC2	NJM4565L-D	TONE CONTROL AMP	
Q1, 2	DTC144EK	TAPE SIG. INH.	Signal inhibition and MUTE output in Tuner and CD-CH modes.
Q3	DTC144EK	ACC DETECT	Outputs early MUTE when ACC is lowered or during manual reset. Performs early grounding of μ-COM CE pin when ACC is switched OFF.
Q4~6	2SC2412K		
Q7	DTC114EK		
Q11	DTC144EK	CD-CH REQ IN BUFF.	
Q12	2SC2412K	CD-CH CD CON BUFF.	
Q13	DTC144EK	CD-CH REQ IN BUFF.	
Q14	2SA1037K	CD-CH REQ IN CONTROL	When ACC is ON, recognizes whether CD-CH is connected or not, and outputs signal to μ-COM.

CIRCUIT DESCRIPTION

1723GF-594-3BE (IC12: X14-3470-12)
Microprocessor IC

Terminal Connections



CIRCUIT DESCRIPTION

Terminal descriptions

Pin No.	Pin Name	I/O	Function Name	Operation
1	NC		NC	
2	EO1	O	EO1	PLL error output terminals. If the frequency obtained by dividing the local oscillation frequency (VCO output) is higher than the reference frequency, these terminals output "H" level. If not, they outpt "L" level.
3	EO2	O	EO2	
4	V_{DD}		V_{DD}	Power input teminal.
5	V COL	I	AM OSC IN	Inputs VCO output from 0.50 to 30 MHz.
6	V COH	I	FM OSC IN	Inputs VCO output from 15 to 200 MHz.
7	CE	I	CE (ACC)	"H" level when it is required that the device operate normally. "L" level when the device is not used.
8	V_{DD}		V_{DD}	Power input terminal.
9	PD1	O	$\overline{FM}$/AM	FM/AM switching port. Outputs "H" during AM reception. Outputs "L" during FM reception. Fixed at "H" in TAPE, CD and AUX (J type) modes, and "L" while SDK (SDK type) is ON. During tuner call, the output varies depending on the band.
10	PD2	O	$\overline{LW}$/DK	(E type) Outputs "L" during LW reception. Also outputs "L" during LW reception in course of tuner call. Outputs "H" in other cases.
			AUX OUT	(J type) Audio signal switching output port. Outputs "H" in CD-CH and AUX modes.
11	PD3	O	LOUD	Loudness control ON/OFF output terminal Switched to "H" or "L" when AUTO/LOUD key has been pressed for 2 sec. "H" → LOUD ON.
12	PC0	O	$\overline{TAPE}$/RADIO	TAPE audio switching port. Outputs "H" in CD-CH and AUX modes.
13	PC1	O	MOTOR	Cassette mechanism motor ON/OFF control port. Outputs "H" while $\overline{TAPE\ IN}$ key is OFF. Outputs "L" in AUX, CD-CH and DK interrupt (SDK type) modes.
14	PC2	O	DISC OUT	Outputs "H" when operating CD changer. Outputs "L" during DK interrupt (SDK type).
15	PC3	O	$\overline{AGC\ CUT}$	Normally, outputs "L" while CE is "H". Outputs "H" in AUX mode.
16	PA0	I	DK IN	(SDK type) Input port for DK detection. Inputs "H" when DK signal is present.
			P-CON IN	(J-type) Input port for AUX input detection. "L" in AUX mode and "H" in other cases.
17	PA1	I	SK IN	(SDK type) Input port for SK detection. Inputs "H" when SK signal is present.
18	PA2	I	DATA-IN	Input terminal of DATA from CD-CH.
19	PA3	I	$\overline{CLK}$	Input terminal of CLK from CD-CH.
20	PB0	O	$\overline{DATA\text{-}OUT}$	Output terminal of DATA to CD-CH.
21	PB1	O	REQ-OUT	Output terminal for requests to CD-CH.
22	PB2	O	MUTE	MUTE output terminal, which outputs "H" in MUTE period. MUTE is not output while CE is "L". If CE turns from "H" to "L" during MUTE output, MUTE also turns from "H" to "L".
23	PB3	O	LOCAL/MTL	LOCAL control output port in Tuner mode. Active "H". In TAPE mode, used as the METAL control output terminal which outputs "H" when METAL is ON.
24	XO	O	XO	X'tal connection terminals.
25	XI	I	XI	
26	GND		GND	
27	CGP	O	BZ	Beep sound pulse output port. Outputs 2.0 kHz pulse for 60 ms.
28	PL3	O	DOLBY	Dolby control output terminal. Outputs "H" when Dolby is ON.
29	PL2	O	$\overline{T\text{-}ADV}$	T-ADV control output terminal. Outputs "L" only when T-ADV and alternate SW FF/REW are ON in TAPE mode.
30	LCD25	O	NC	Segment output terminals.
31 ≀ 44	LCD24 ≀ LCD11	O	S24 ≀ S11	

CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Function Name	Operation
45 ~ 47	LCD10/KS10 ~ LCD8/KS8	O	S10 ~ S8	Segment output and key source terminals.
48 ~ 50	LCD7 ~ LCD5	O	S7 ~ S5	Segment output terminals.
51 ~ 55	LCD4/KS4 ~ LCD0/KS0	O	S4 ~ S0	Segment output and key source terminals.
56	COM1	O	COM1	Common output terminals.
57	COM2	O	COM2	
58	GND		GND	
59 ~ 62	K3 ~ K0	I	K3 ~ K0	Key input terminals.
63	AD	I	SD	Station detection input terminal. Inputs "H" when a station is detected.
64	$\overline{\text{INT}}$	I	$\overline{\text{REQ-IN}}$	Input terminal for requests from CD-CH.

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CIRCUIT DESCRIPTION

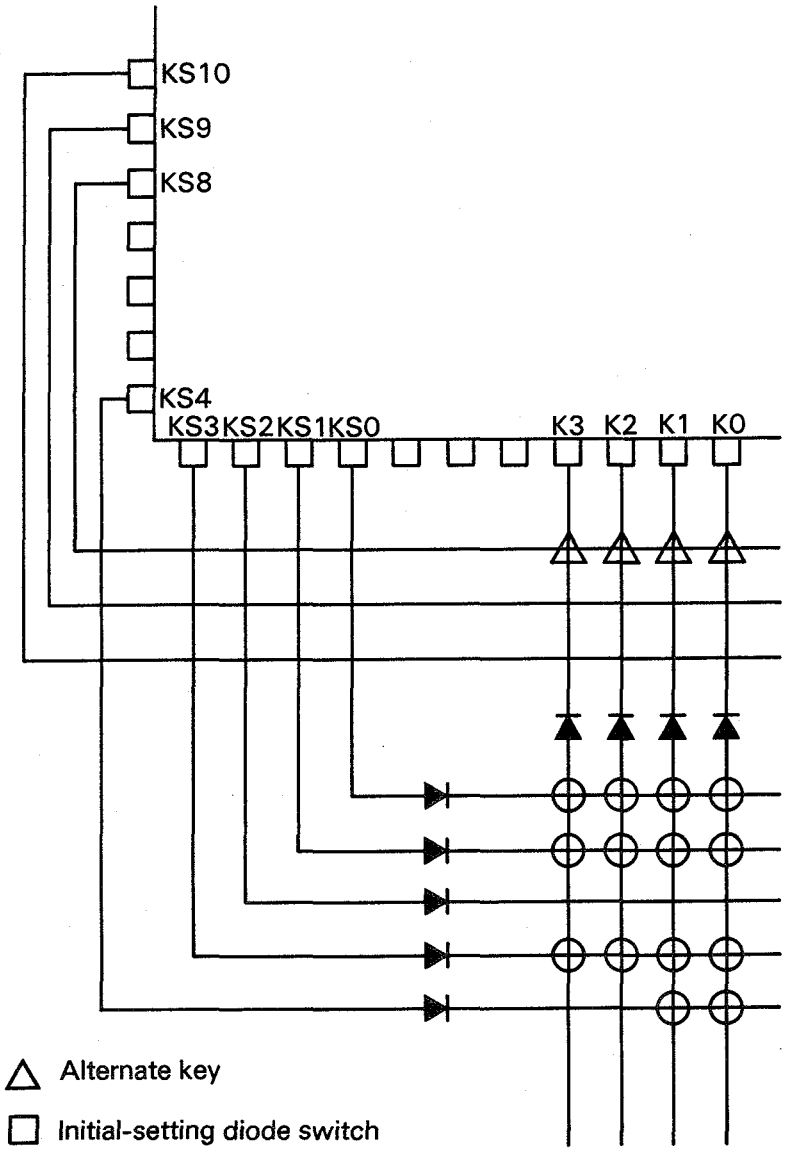
Key Matrix

Momentary key Alternate key Initial-setting diode switch

	K0 (No. 62)	K1 (No. 61)	K2 (No. 60)	K3 (No. 59)
KS0 (No. 55)	DISC	CLK / P-SCAN	DOWN/TRACK ⊖	UP/TRACK ⊕
KS1 (No. 54)	AUTO/LOUD	LOCAL/AME	AM/DISC ⊖	FM/DISC ⊕
KS2 (No. 53)				
KS3 (No. 52)	1/MTL	2/T-ADV	3/DOLBY	4/REPEAT
KS4 (No. 51)	5/SCAN	6/RANDOM		
KS8 (No. 47)	$\overline{\text{TAPE IN}}$	FWD/$\overline{\text{REV}}$	FF/REW	$\overline{\text{ST}}$
KS9 (No. 46)				
KS10 (No. 45)				

CIRCUIT DESCRIPTION

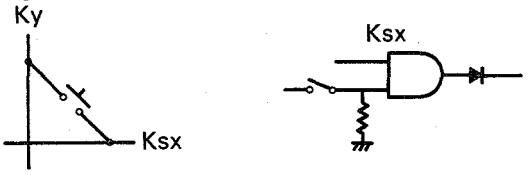
Key matrix configuration and model



△ Alternate key

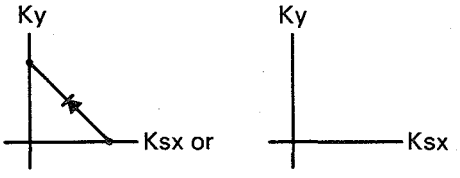
□ Initial-setting diode switch

○ Momentary key



Momentary key

Alternate key

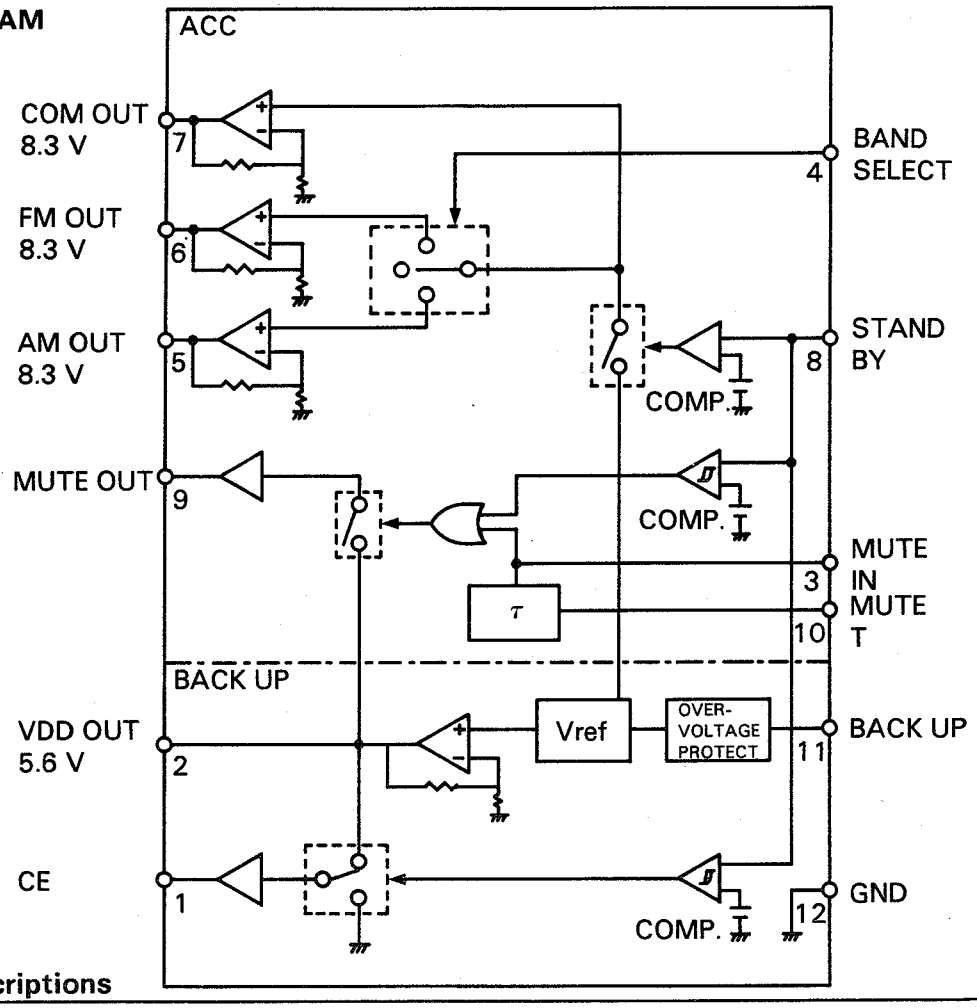


Initial-setting diode switch

CIRCUIT DESCRIPTION

BA3906-V1 (IC11: X14-3470-12)
Power Supply IC

BLOCK DIAGRAM

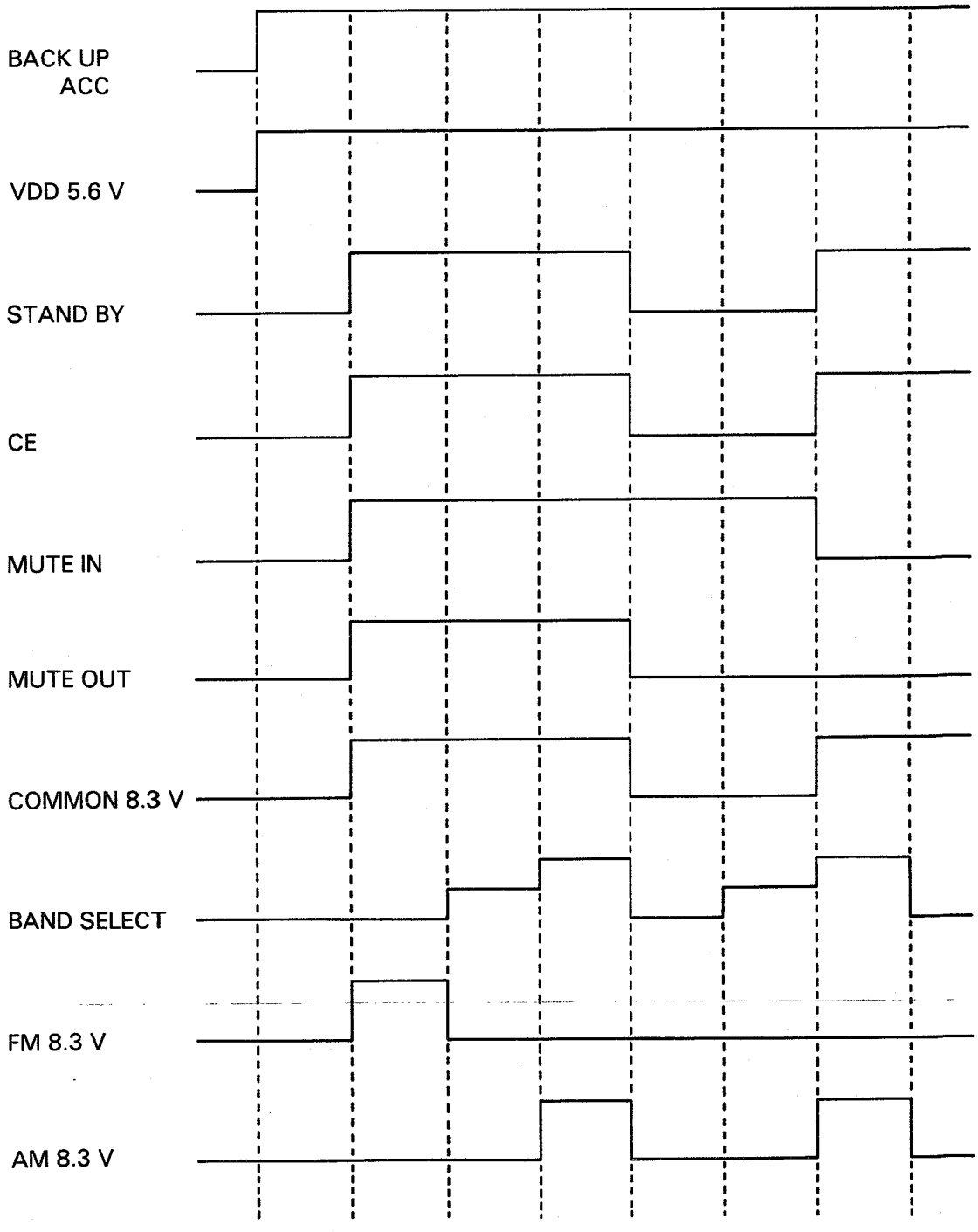


Terminal descriptions

1	CE	Outputs 0.82 × V_{PP} or more when the μ-COM is to be operated normally, and outputs 0 V when it is not used. Holds 0 V even during stand-by.
2	V_{DD}	5.6 V power supply with 60 mA max. output current. For use with μ-COM. Permanently outputs voltage provided that the backup power is connected.
3	MUTE IN	Input terminal for MUTE from μ-COM or other external sources.
4	BAND SELECT	AM/FM output selection input with 3-state input. 8.3 V power supply with 145 mA max. output current. For use in AM reception.
5	AM OUT	Outputs power when "H" is input to BAND SELECT terminal.
6	FM OUT	8.3 V power supply with 250 mA max. output current. For use in FM reception. Outputs power when "L" is input to BAND SELECT terminals.
7	COM OUT	8.3 V power supply with 125 mA max. output current. For use in tone control. The power can be used as the system common power for the volume/balance control, for the equalizer, in the cassette tape deck, and for the varicap in the electronic tuner. Power is output when STANDBY terminal is 6.5 V or more, regardless of the BAND SELECT terminal position.
8	STAND BY	0 V for stand-by mode, in which signal is output only from V_{DD} terminal. The voltage at this terminal determines CE output and MUTE OUT output as well as AM OUT, FM OUT and COM OUT outputs.
9	MUTE OUT	MUTE transistor driver.
10	MUTE	Time constant terminal for MUTE IN.
11	BACK UP	Connected to backup power and ACC power of the vehicle.
12	GND	Input/output timing chart Ground.

CIRCUIT DESCRIPTION

Input/Output timing chart 102



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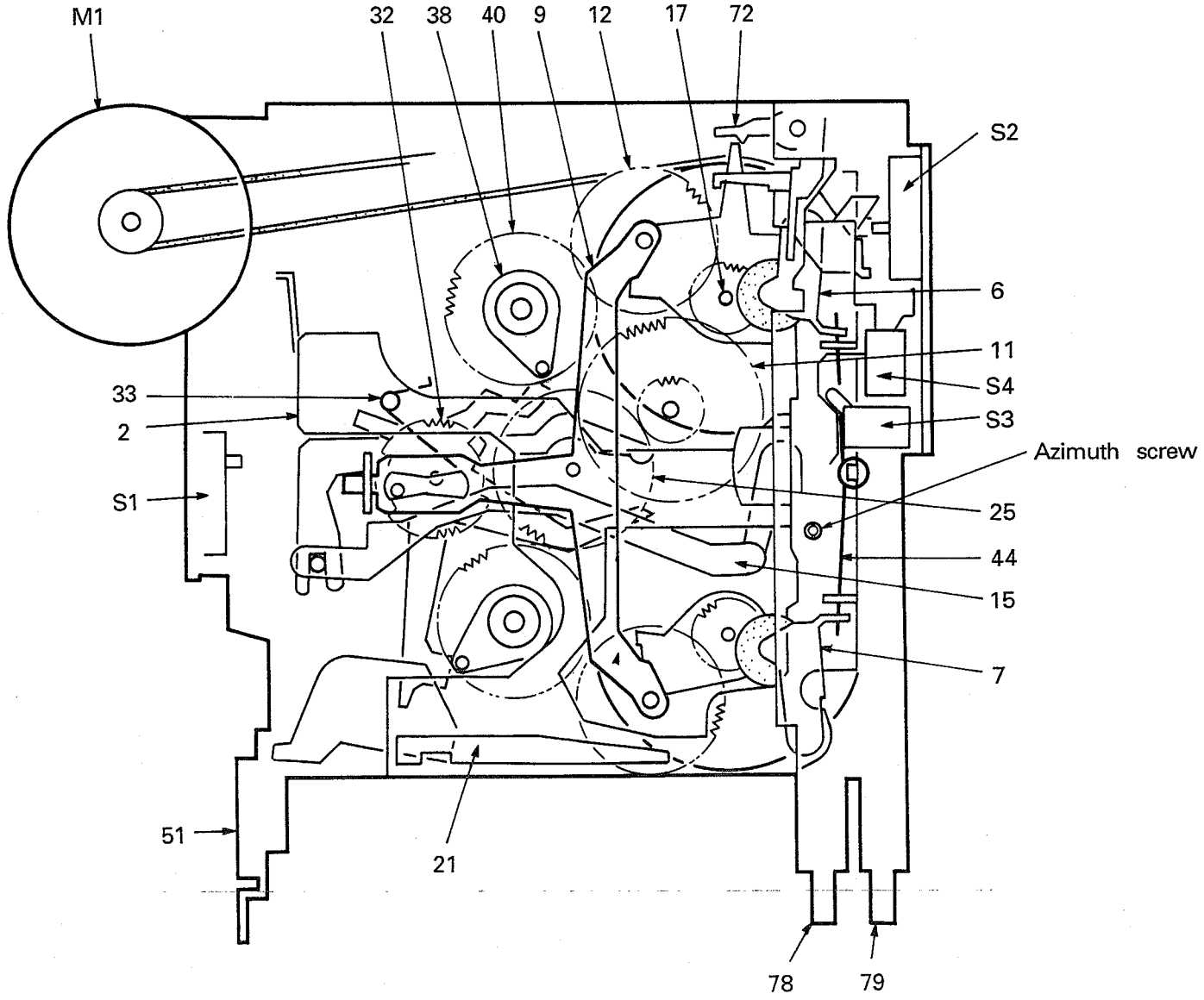
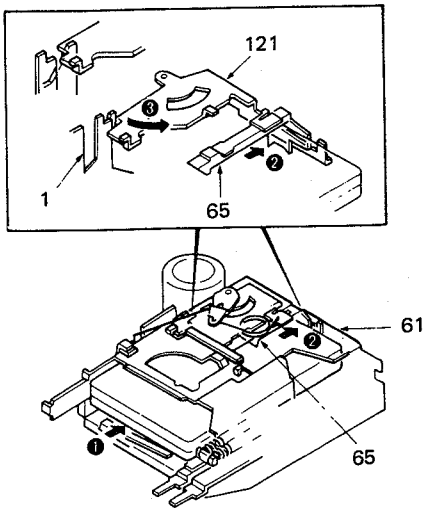
MECHANISM OPERATION DESCRIPTION



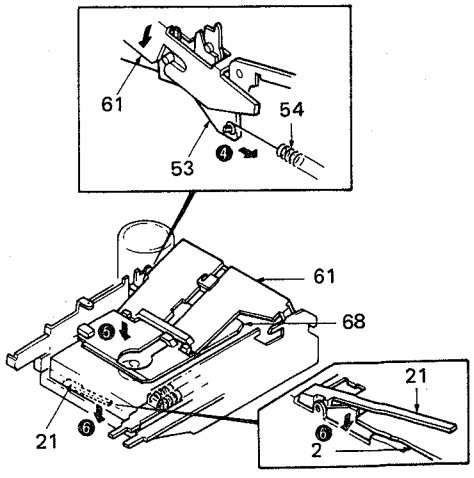
MECHANISM OPERATION DESCRIPTION

LOADING/PLAY

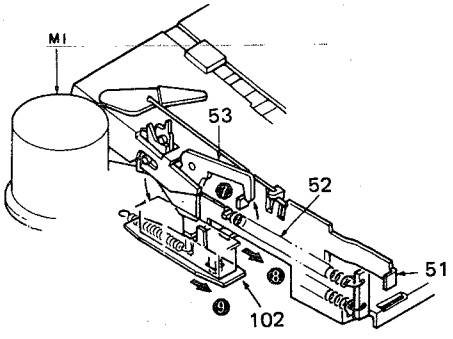
1. Insert a cassette tape (❶).
2. The cassette guide (65) pushes to lever (reverse [121]) (❷).
3. The lever (reverse [121]) turns in the direction of the arrow and releases the lock of the holder (action plate [61]) (❸).



4. Through the lock release of the lever (reverse [121]), the arm (action [53]) is pulled by the tension spring (54), which turns the holder (action plate [61]). The holder (action plate) descends (❹).
5. Through the descent of the holder (action plate [61]), the holder (cassette case [68]) also descends (❺).
6. As the holder (cassette case [68]) descends, the cassette tape pushes the lever (lock plate [21]). The lever (lock plate [21]) then releases the lock of the lever assembly (head plate [2]) (❻).

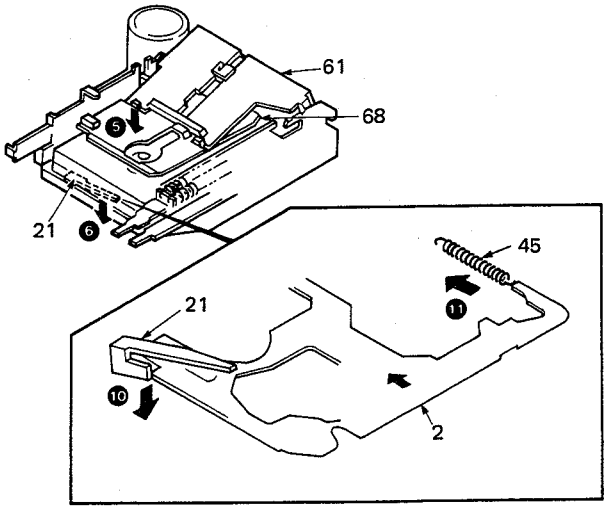


7. As the arm (action [53]) turns, the lock of the lever assembly (eject [51]) is released (❼).
8. The lever assembly (eject [51]) is pulled by the tension spring (52) and moves forward (❽).
9. Through the movement of the lever assembly (eject [51]), the lever (102) also moves forward and turns on the slide switch S1. As the slide switch S1 is turned on, electricity is supplied to the motor assembly (M1) (❾).

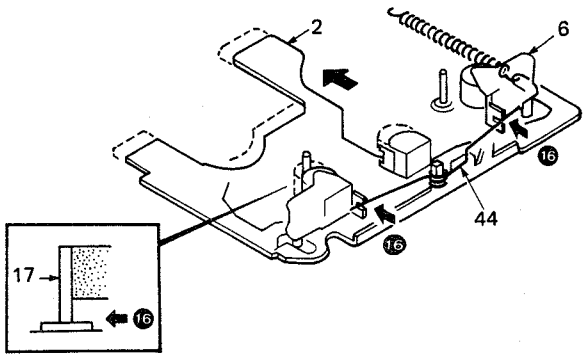


MECHANISM OPERATION DESCRIPTION

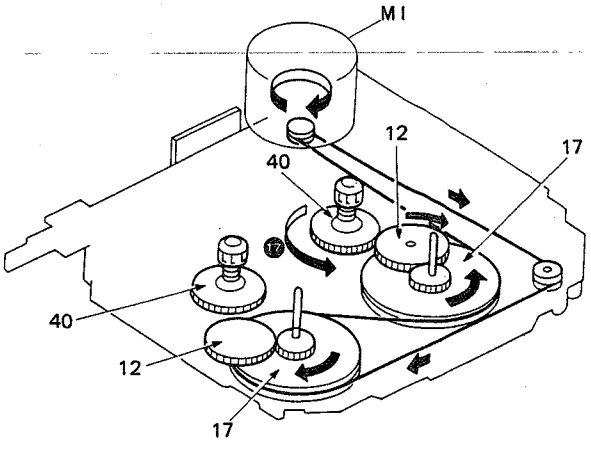
10. As the holder (cassette case [68]) descends, the cassette tape pushes the lever (lock plate [21]) then releases the lock of the lever assembly (head plate [2]) (⑩).
11. The lever assembly (head plate [2]) is pulled by the tension spring (45) and moves forward (⑪).



12. Through the forward movement of the lever assembly (head plate [2]), pinch roller assembly (6) make close contact with the shaft of the flywheel (17) through the formed wire spring (44) (⑯).



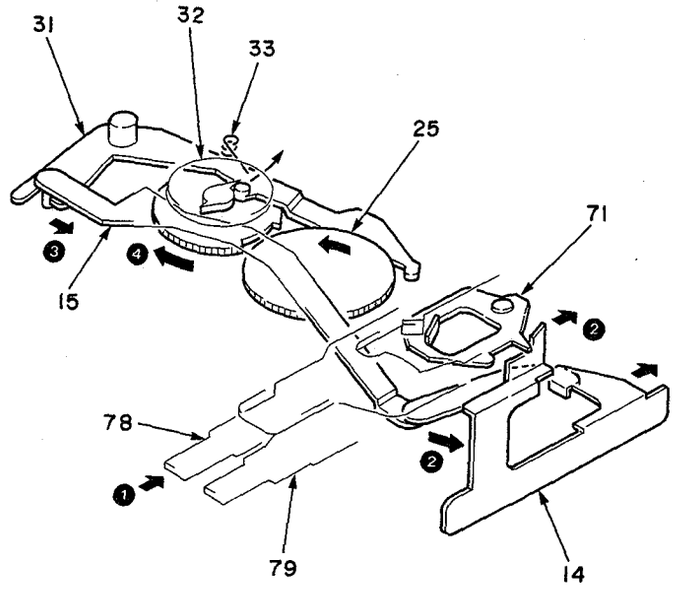
13. The rotation is transmitted from each gear (17-12) to the reel base (40) of the take-up side (⑰).



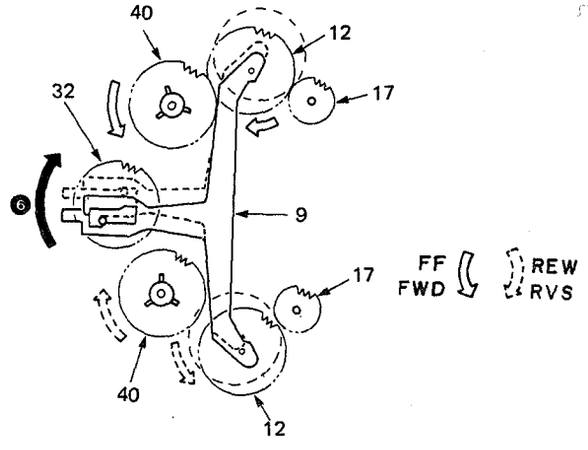
MECHANISM OPERATION DESCRIPTION

PROGRAM

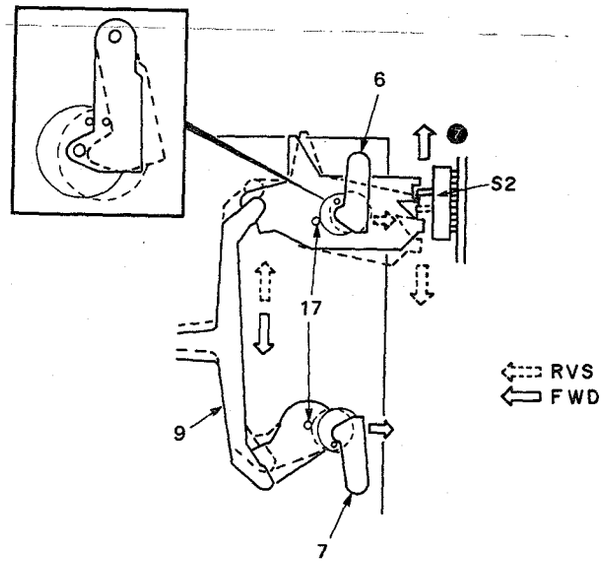
1. Push the FF and REW levers simultaneously (❶).
2. The arm assembly (15) moves toward the right (❷).
3. The lever (31) is pulled (❸), and the changeover gear (32) is unlocked.
4. The changeover gear is pushed by the torsion spring (33), and engaged with the cam gear (25) (❹).
5. The changeover gear (32) is rotated by a half turn and locked with the lever (31) again.



6. The movement of the boss of the changeover gear (32) moves the changeover arm (9) (❻).



7. When the changeover arm (9) moves, the drive direction of the reel base (40), head switch (S2) and pinch roller is switched between FWD and RVS (❼).

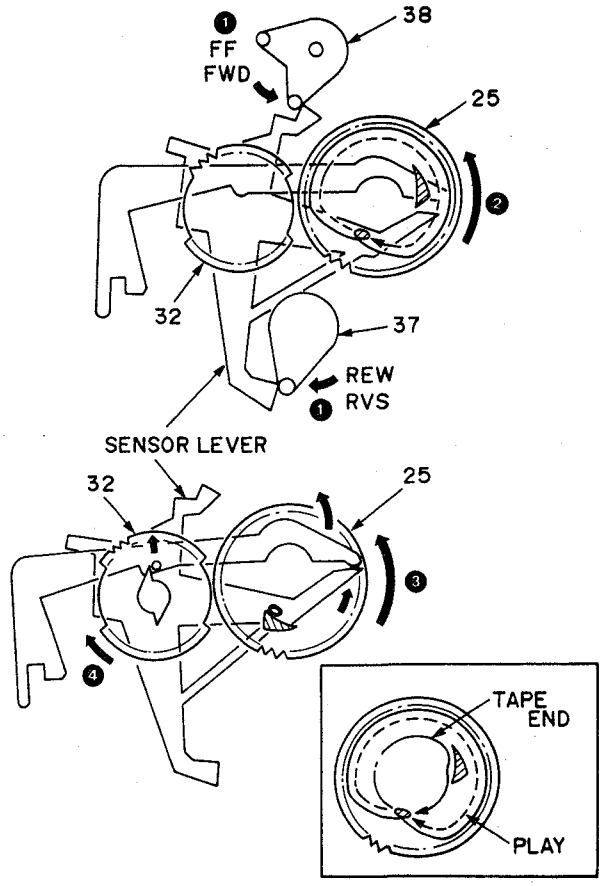


KRC-640/650

MECHANISM OPERATION DESCRIPTION

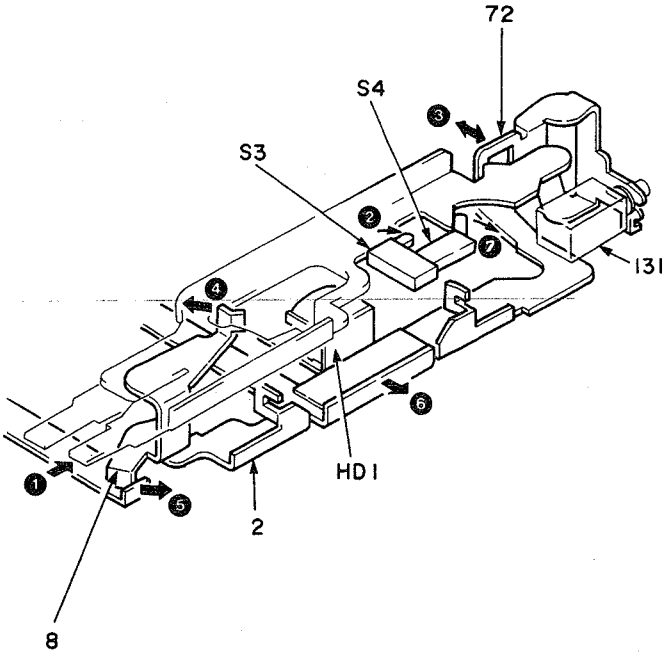
AUTO REVERSE

1. When the reel base (40) stops rotation at the end of tape, the arm (38) stops pushing the sensor lever (❶).
2. The sensor lever is engaged with the cam projection of the cam gear (25) and carried until the intermediate point of the cam gear (❷).
3. Then, the sensor lever is carried by the triangular boss of the cam gear (25) and pushes the lock lever (❸).
4. When the lock lever is pushed, the changeover gear rotates and the program operation starts (❹).



FF

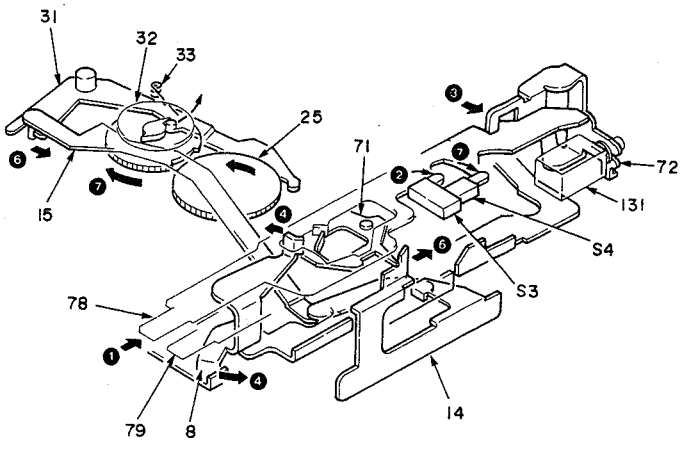
1. Push the lever FF (79) (❶).
2. Pushing the lever FF (79) closes the leaf switch (S3) and muting is applied (❷).
3. The lever FF (79) is locked by the arm (72) (❸).
4. By pushing the lever FF (79), the lever (8) is pushed in the direction of arrow (❹).
5. Through being pushed, the lever (8) moves the lever assembly (head plate [2]) backward a little (❺). The playback head (HD1) and pinch roller also moves backward a little.
6. The rotation of the reel base (40) is high-speeded by the speed selector switch (S4) (❻).
7. In the operation of T.ADV, electricity is supplied to the solenoid (131), which attracts the arm (FR release [72]). The lock on the arm (FR release [72]) is released, FF is released and FWD PLAY is engaged.

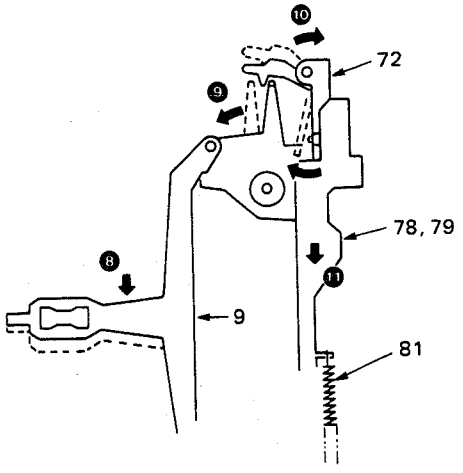


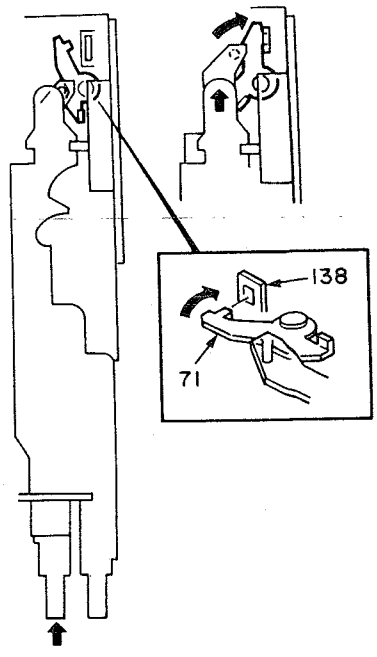
MECHANISM DESCRIPTION

REW

1. Push the lever REW (78) (❶).
2. Pushing the lever REW (78) closes the leaf switch (S3) and muting is applied (❷).
3. The lever REW (78) is locked by the arm (72) (❸).
4. By pushing the lever REW (78), the lever (8) is pushed in the direction of arrow (❹).
5. Through being pushed, the lever (8) moves the lever assembly (head plate [2]) backward a little (❺). Through the backward movement of the lever assembly, the playback head (HD1) and pinch roller (7) also moves backward a little.
6. This time, the lever REW (78) moves the arm assembly (15) and PROGRAM operation is engaged (❻).
7. The rotation of the reel base (40) is high-speeded by the speed selector switch (S4) (❼).
8. At the tape end during the operation of REW, the end sensor is activated, and the changeover arm (9) moves the arm (72) during the operation of PROGRAM (❽) (❾) (❿). The lever REW (78) is released (⓫).
9. To release REW, slightly depress the lever FF (79).
10. By depressing the lever FF (79), the arm (72) moves, and the lever REW (78) returns by the tension spring (81) (⓫).
11. In the operation of T.ADV, electricity is supplied to the solenoid (131), which attracts the arm (FR release [72]). The lock on the arm (FR release [72]) is released, REW is released, and RVS PLAY is engaged.
12. In the channel select operation of this time, the actuator (138) is locked with a hook (71) so that the head select switch does not switch.





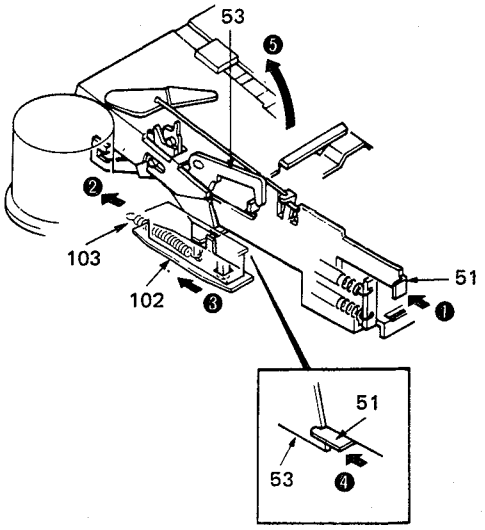


KRC-640/650

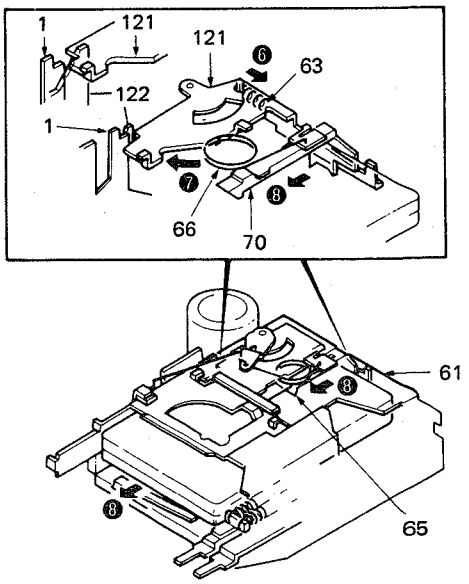
MECHANISM OPERATION DESCRIPTION

EJECT

1. Push the lever assembly (eject [51]) (❶).
2. By pushing the lever assembly (eject [51]), the tension spring (103) pushes the lever (102) (❷).
3. Though pushing the lever (102), the slide switch (S1) is turned off, and the lever assembly (head plate [2]) moves backward (❸).
4. The lever assembly (eject [51]) pushes and turns the arm (action [53]) (❹).
5. By turning, the arm (action [53]) pushes up the holder (action plate [61]) (❺).



6. When the holder (action plate [61]) is pushed up, the lever (reverse [121]) is pulled by the tension spring (63) and turns (❻).
7. In turning, the lever (reverse [121]) is put on the lever of the mechanism chassis (122) (❼).
8. The cassette guide (65) is pushed forward by the torsion coil spring (66) , and the cassette tape is ejected (❽).



ADJUSTMENT

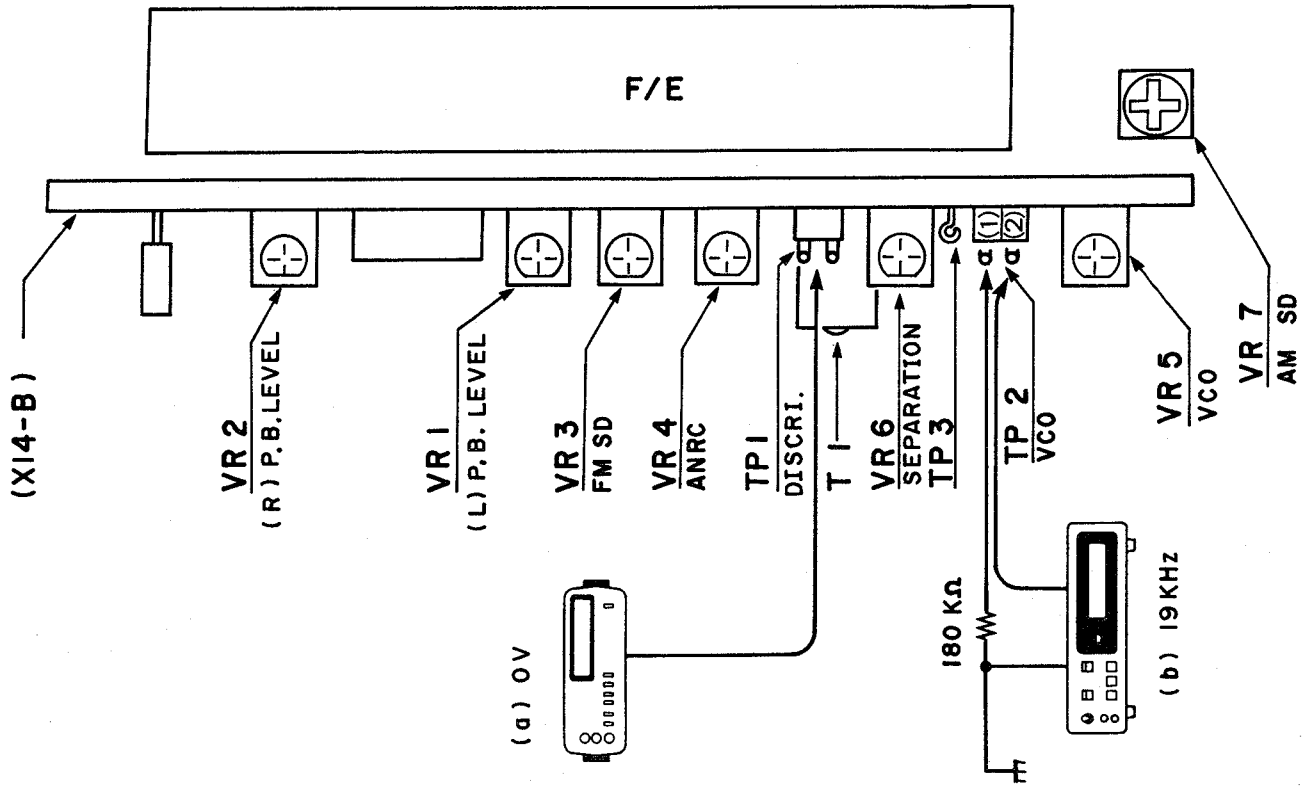
Set the controls and switches as follows.

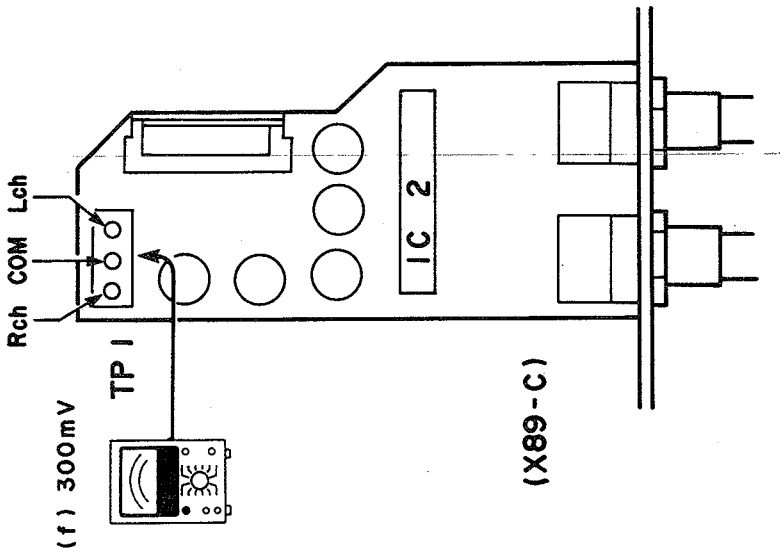
BALANCE	:center position	LOUD	:OFF	LOCAL	:OFF
FADER	:center position	T・ADV	:OFF	AUTO	:OFF
BASS	:center position	METAL	:OFF		
TREBLE	:center position	DOLBY NR	:OFF		

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER(RECEIVER) SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION							
1	DISCRI-MINATOR	(A) 98.1MHz 0 dev 60dBμ(ANT input)	Connect the DC voltmeter between pins of TP1(X14 B/3)	FM 98.1MHz	T1 (X14 B/3)	0V	(a)
2	VCO	(A) 98.1MHz 0 dev 60dBμ(ANT input)	Connect a frequency counter to TP2 (2) and GND	FM 98.1MHz Connect a R(180KΩ) between TP2(1)and GND	VR5 (X14 B/3)	19KHz	(b)
3	SEPA-RATION	(C) 98.1MHz 1kHz, ±40kHz dev Pilot:±7.5kHz dev Selector:L or R 60dBμ(ANT input)	(B)	FM 98.1MHz	VR6 (X14 B/3)	Adjust it so that the crosstalk from L to R and R to L become minimum.	
4	ANRC	(C) 98.1MHz 1kHz, ±40kHz dev Pilot:±7.5kHz dev Selector:L or R 35dBμ(ANT input)	(B)	FM 98.1MHz Connect a lerd wire between TP3 and GND	VR4 (X14 B/3)	Separation 10dB	
5	SEEK STOP LEVEL	(A) 98.1MHz 1kHz, ±40kHz dev 20dBμ(ANT input)	Connct the DC voltmeter to TP5(X14 A/3)	FM SEEK:ON 98.1MHz	VR3 (X14 B/3)	Low → High(Voltage) (Seek stop)	(c)
AM SECTION							
(1)	SEEK STOP LEVEL	(D) 1000kHz 400Hz, 30% mod 35dBμ(ANT input)	Connect the DC voltmeter to TP5(X14 A/3)	AM 1000kHz	VR7 (X14 A/3)	Low → High(Voltage) (Seek stop)	(c)
CASSETTE DECK SECTION							
[1]	AZIMUTH	MTT-114 10kHz	(B)	TAPE PLAY	Head Azimuth Screw	Adjust the azimuth for each L CH/R CH or FWD/RVS becomes maximum.	(e)
[2]	PLAYBACK LEVEL	MTT-150	Connect a AC voltmeter to TP1(X89 C/3)	TAPE PLAY	VR1 (L) VR2 (R) (X14 B/3)	300mV	(f)

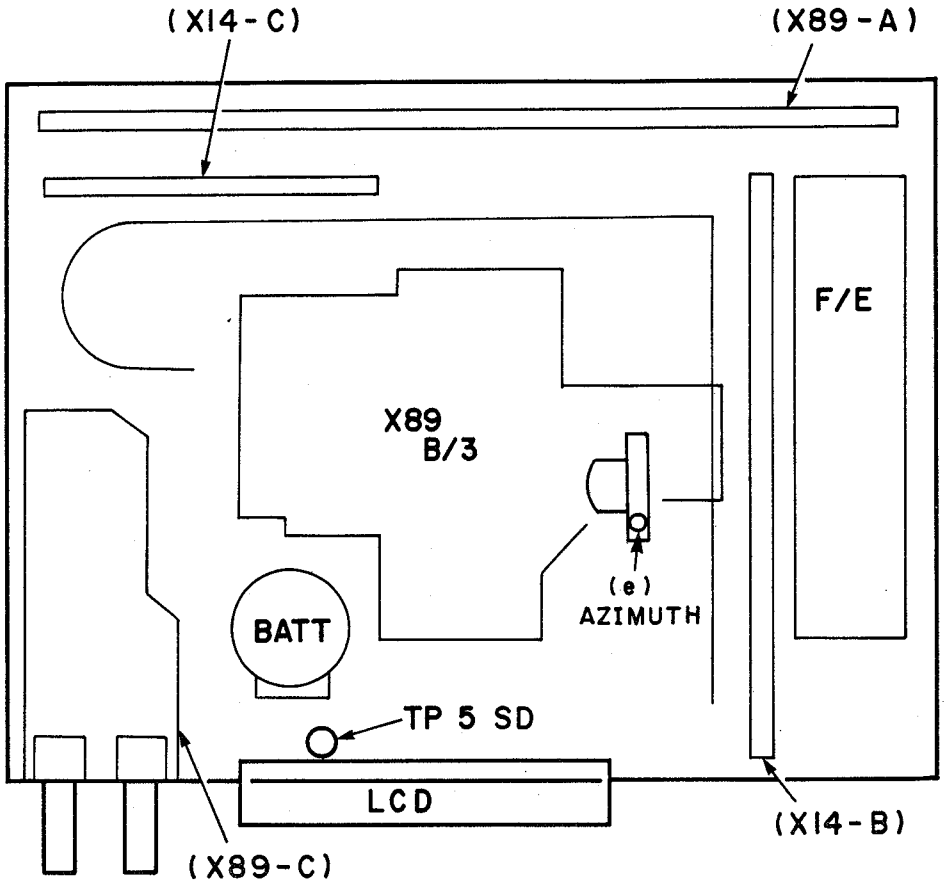
KRC-640/650

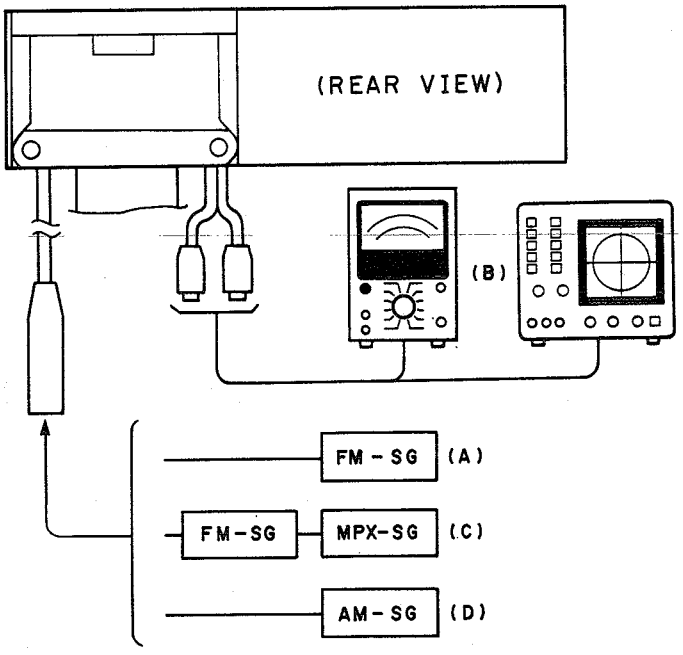
ADJUSTMENT





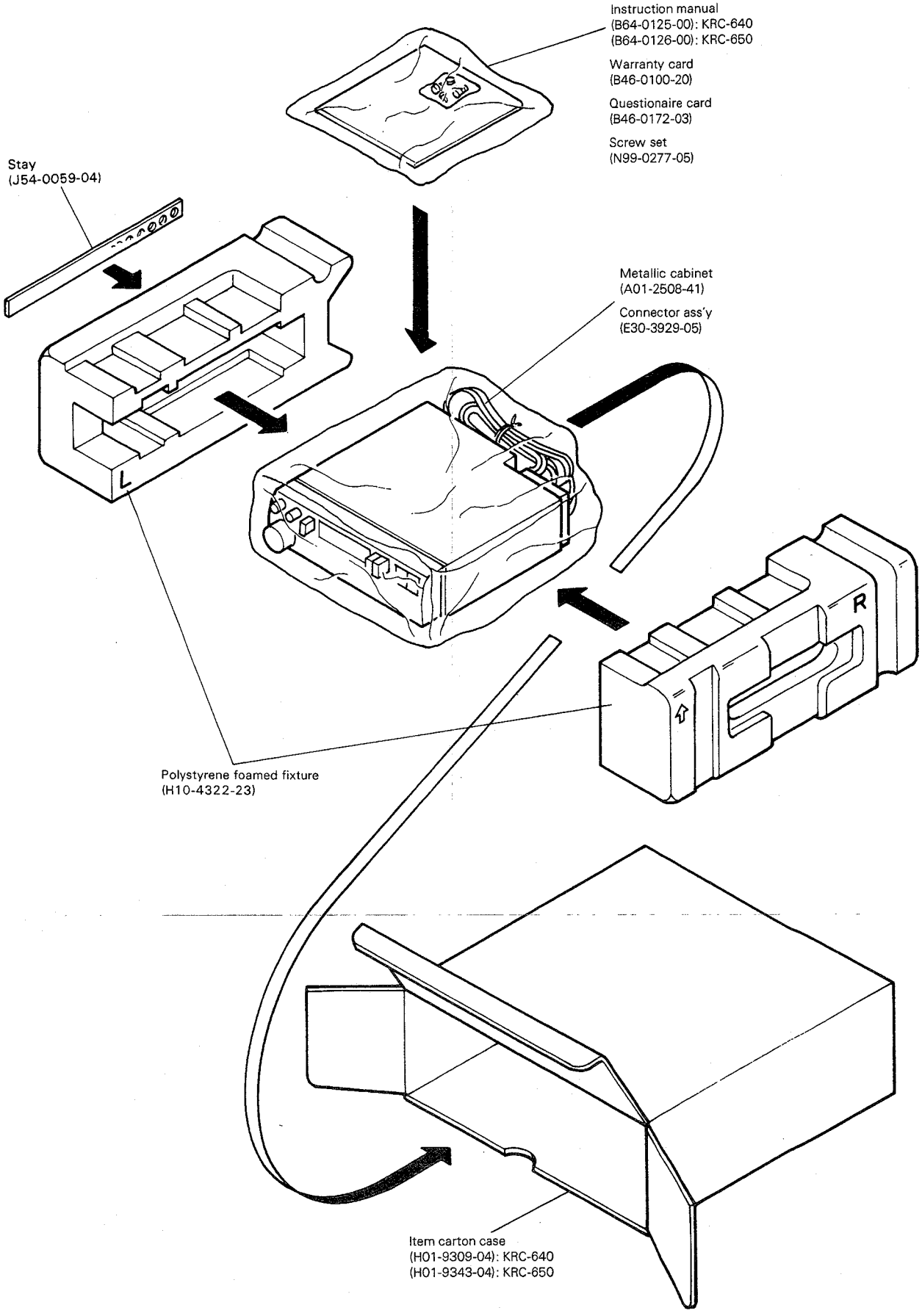
ADJUSTMENT


(X14-C)
(X89-A)
F/E
X89
B/3
(e)
AZIMUTH
BATT
TP 5 SD
LCD
(X89-C)
(X14-B)


(REAR VIEW)
(B)
FM-SG
(A)
FM-SG
MPX-SG
(C)
AM-SG
(D)

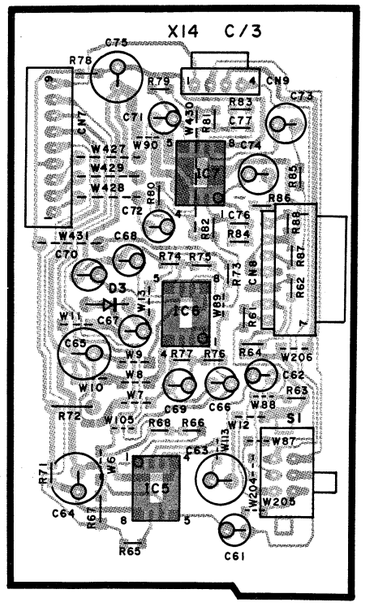
KRC-640/650

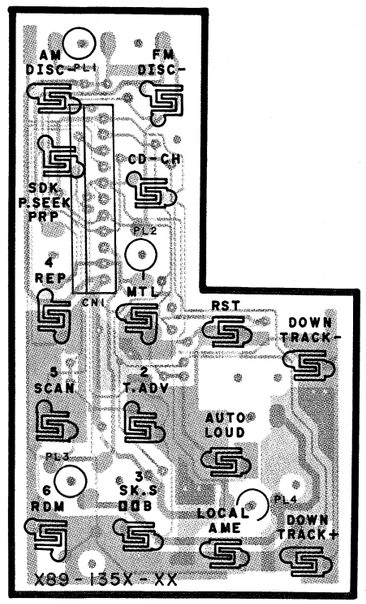
PACKING

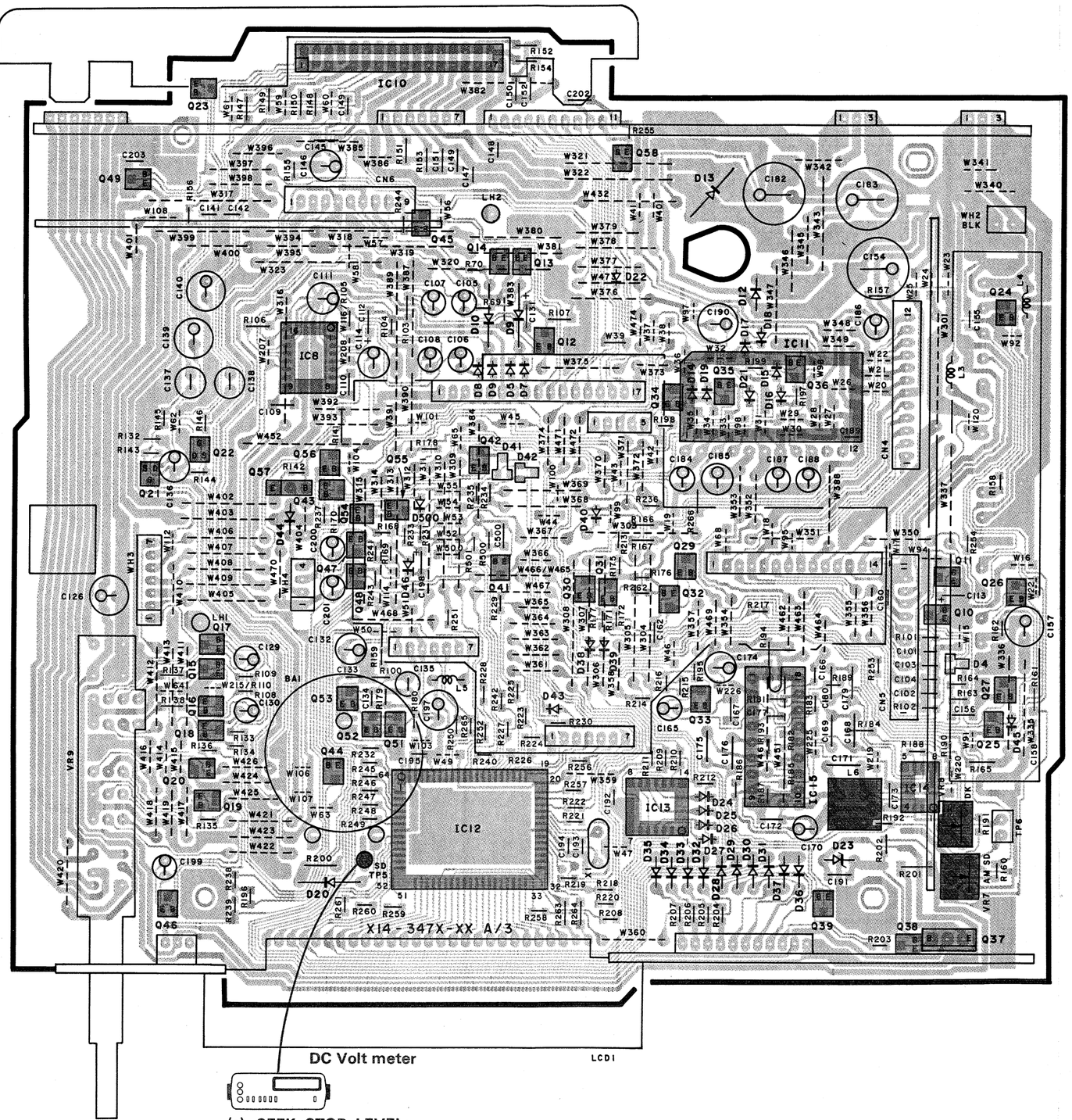


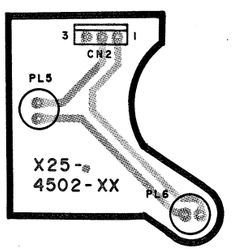
PC BOARD (Component side view)

SYNTHESIZER UNIT (X14-3470-12)



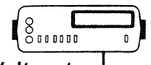




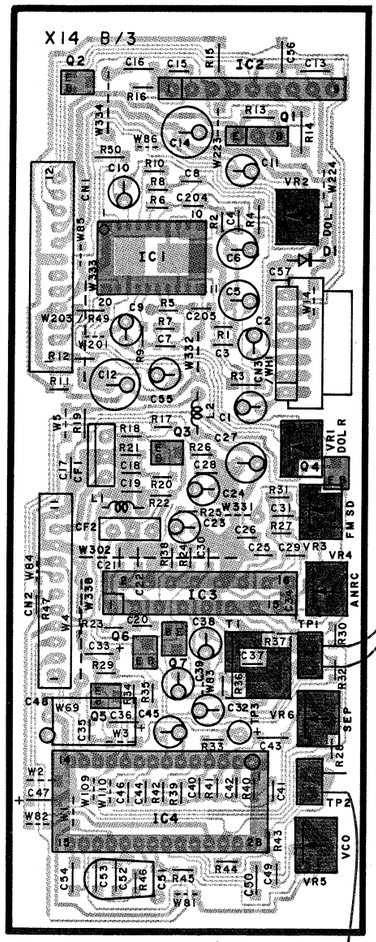


(c) SEEK STOP LEVEL:
Low → High (Voltage)
(Seek stop)

(a) DISCRIMINATOR:
0 V



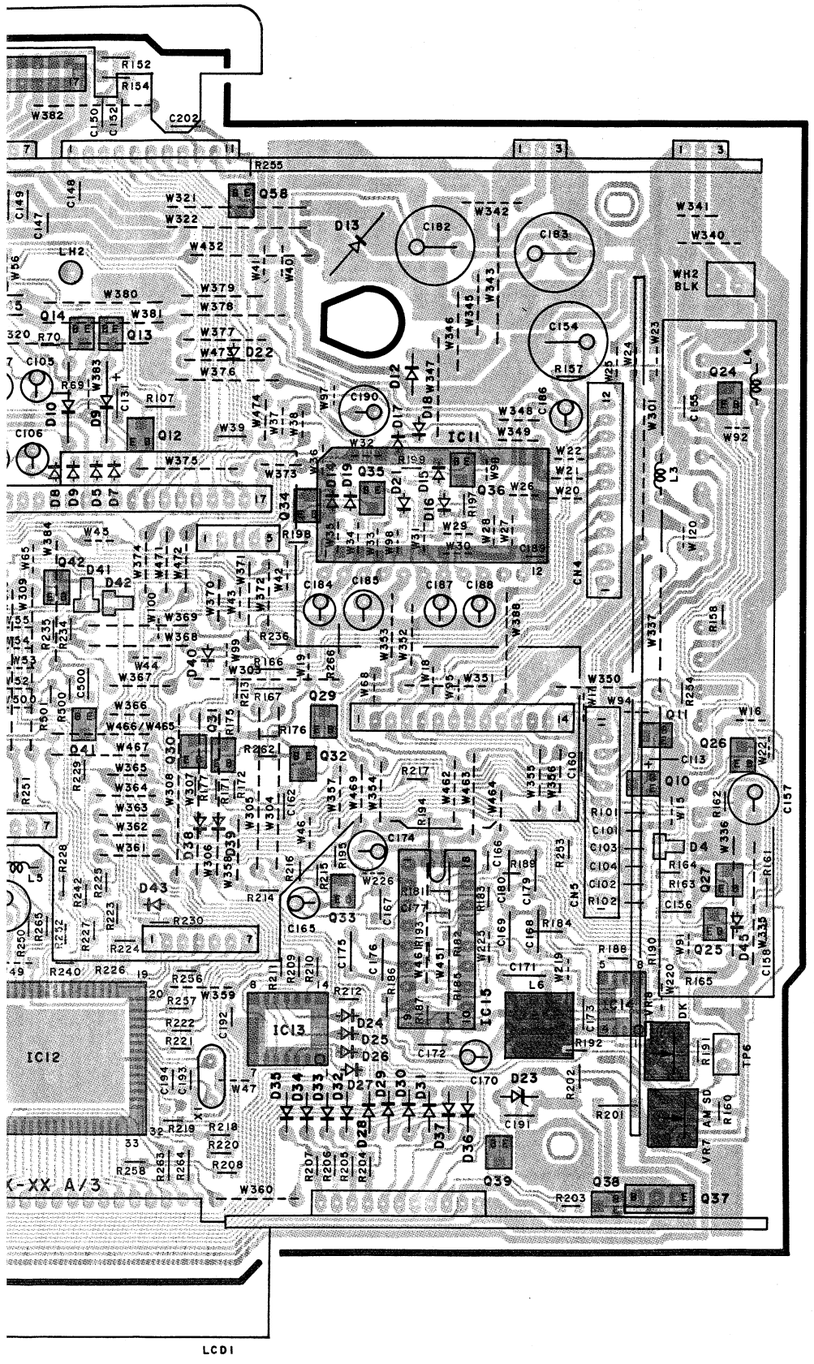
DC Volt meter



Frequency counter

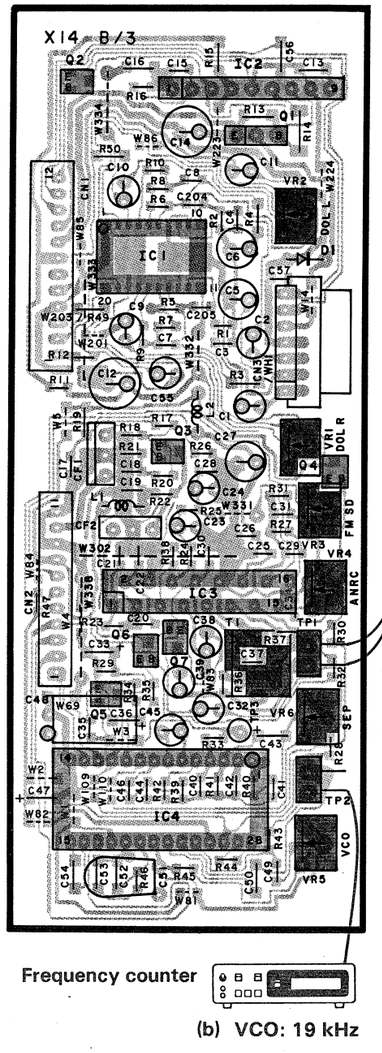
(b) VCO: 19 kHz

Refer to the schematic diagram for the values of resistors and capacitors.



(a) DISCRIMINATOR: 0 V

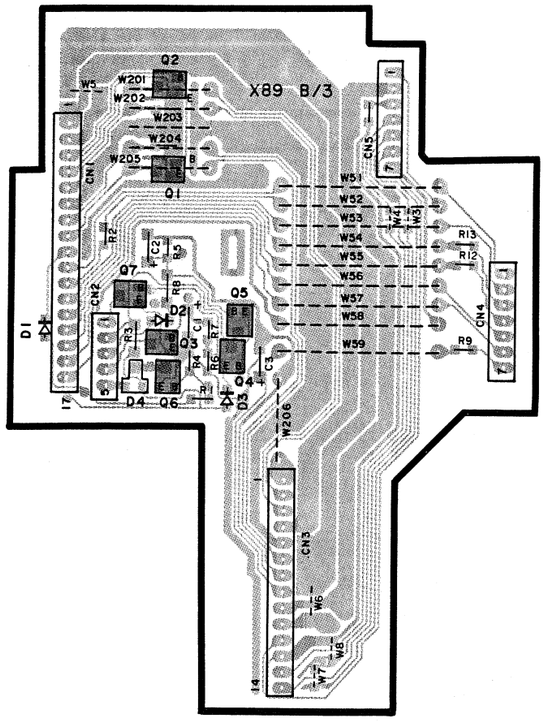
DC Volt meter



Frequency counter

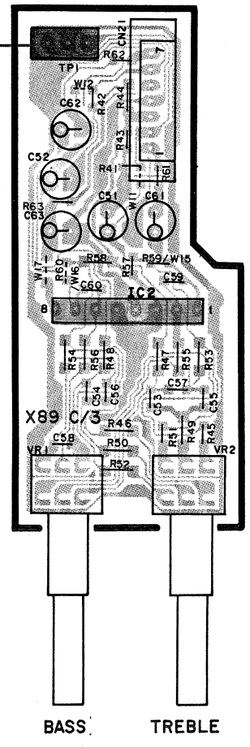
(b) VCO: 19 kHz

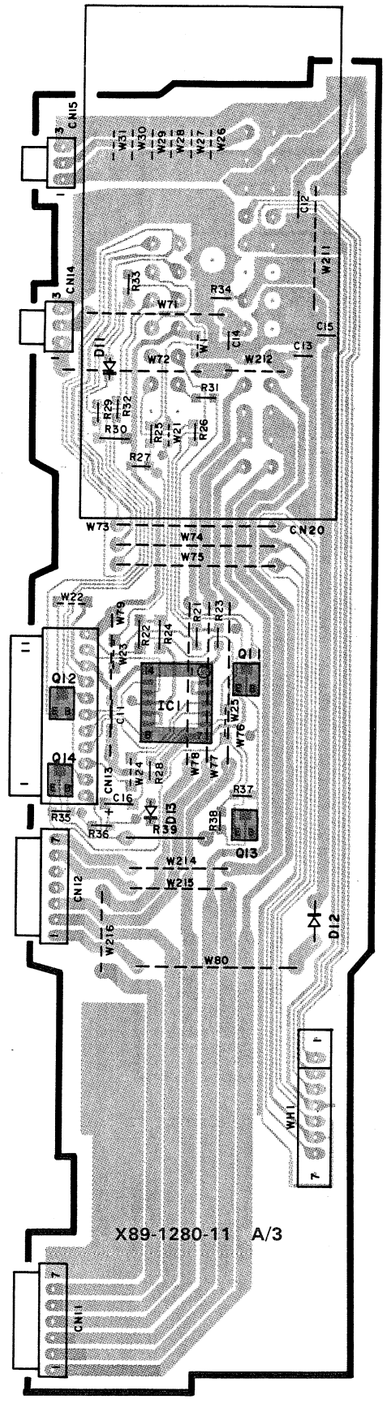
DAUGHTER UNIT (X89-1282-70)



AC Voltmeter

(f) PLAY BACK LEVEL: 300 mV





X14-3470-10

Ref. No. IC	Ref. No. Q	Address
	4	3J
	5	5I
	6	4I
	7	4I
	10	
	11	4H
	12	3E
	13	2E
	14	2E
	17	4D
	18	5D
	19	5D
	20	5D
	21	4C
	22	3D
	23	1D
	24	3H
	25	5H
	26	4H
	27	5H
	29	4C
	30	4F
	31	4F
	32	4F
	33	5F
	34	3F
	35	3F
	36	3G
	37	6H
	38	6G
	39	6G
	42	3E
	43	4D
	44	5D
	46	6C
	47	4D
	49	2C
	51	5E
	52	5D
	53	5D
	54	4D
	55	4E
	56	3D
	57	4D
1		3I
2		2I
3		4I
4		5I
5		3A
6		2B
7		1B
8		3D
11		3G
12		5E

Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Foil Side View)

(a) DISCRIMINATOR: 0 V

DC Volt meter

X14 B/3

Frequency counter

(b) VCO: 19 kHz

SYNTHESIZER UNIT (X14-3470-12)

X14-347X-XX A/3

DC Volt meter

(c) SEEK STOP LEVEL
Low → High (Voltage)
(Seek stop)

X14 C/3

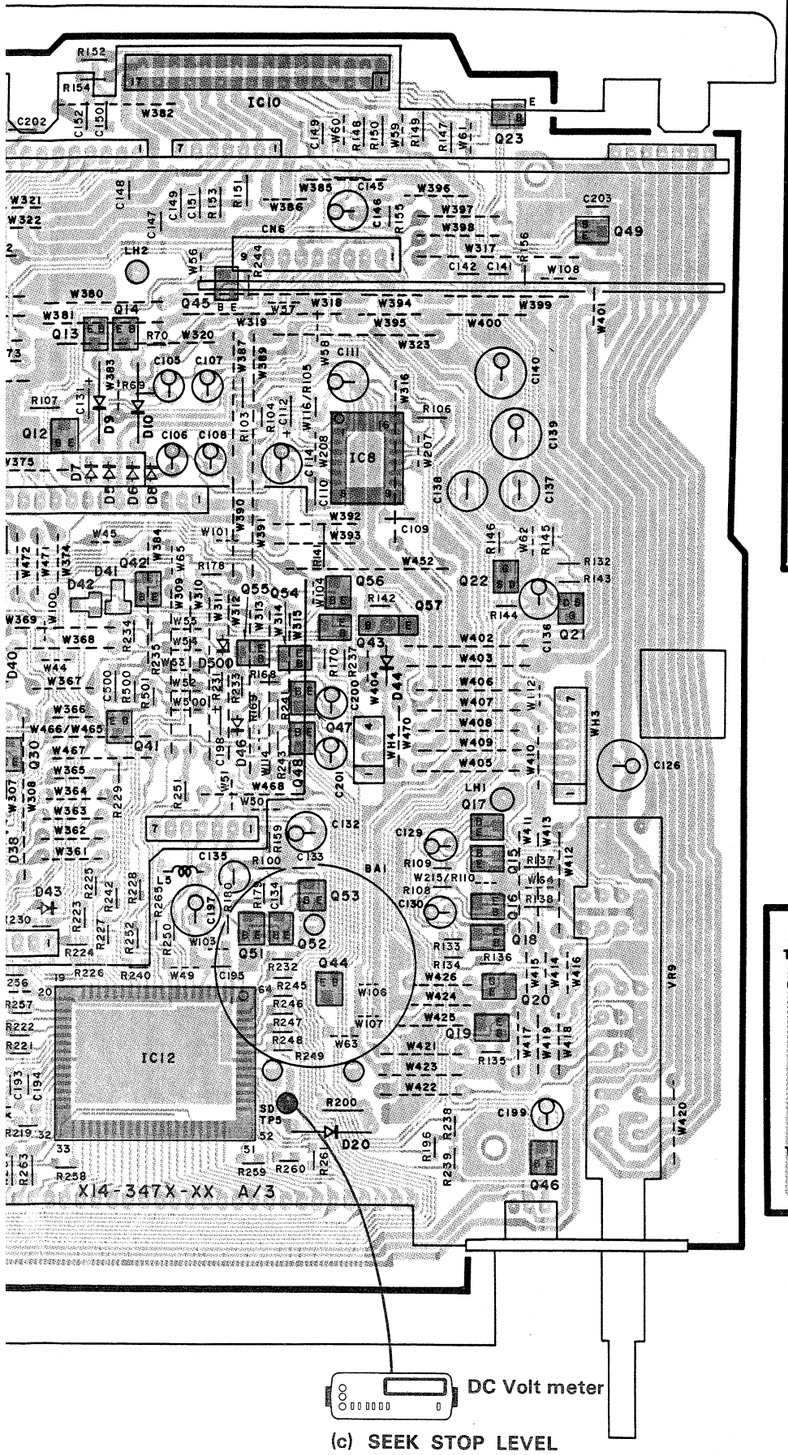
X89-135X-XX

X25-4502-XX

DAUGHT

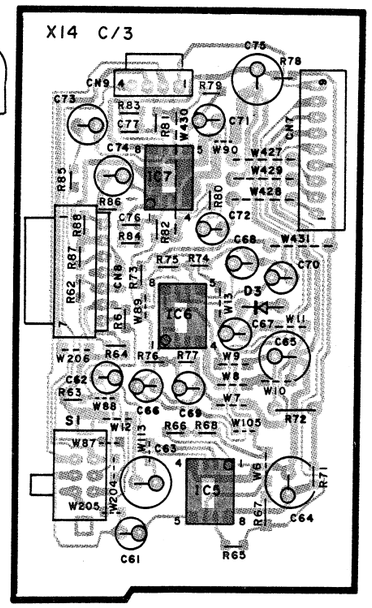
X89
X89

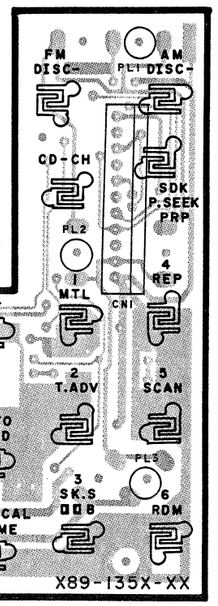
Refer to the schematic diagram for the values of resistors and capacitors.

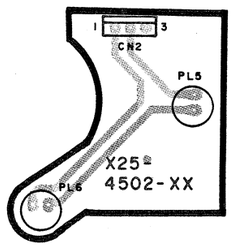


DC Volt meter

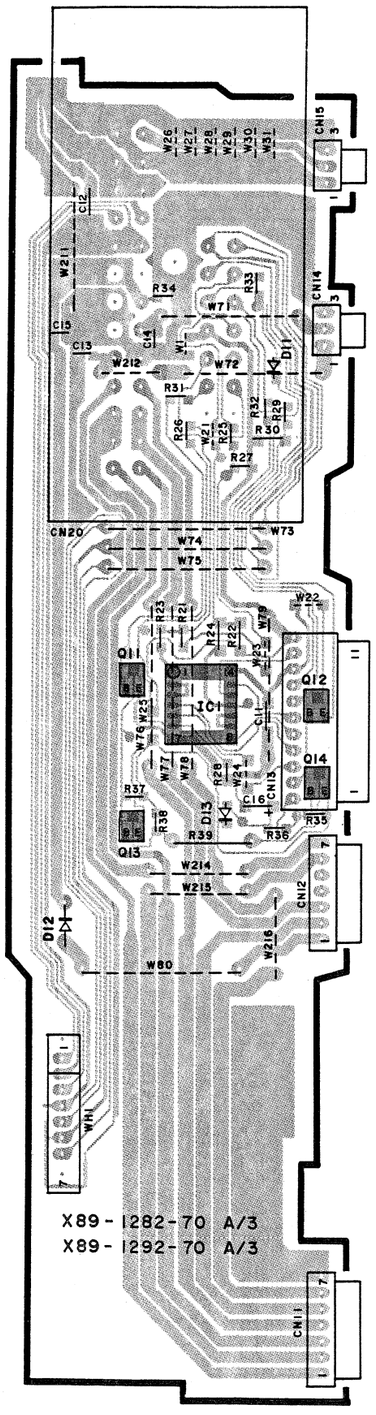
(c) SEEK STOP LEVEL
Low → High (Voltage)
(Seek stop)

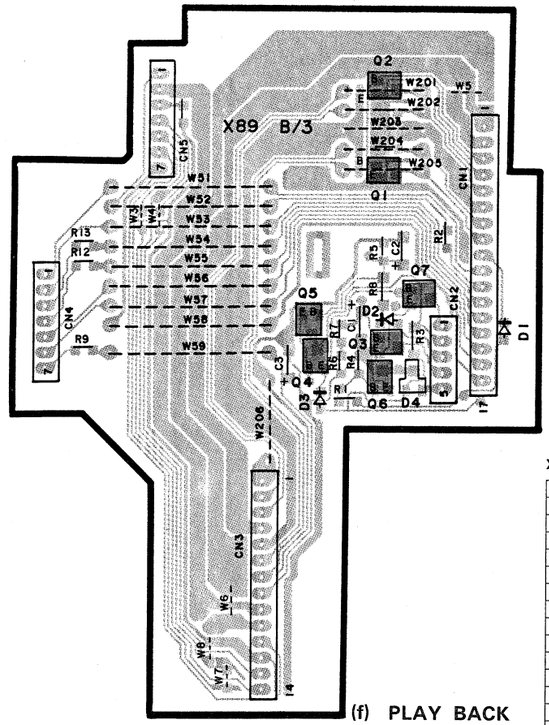




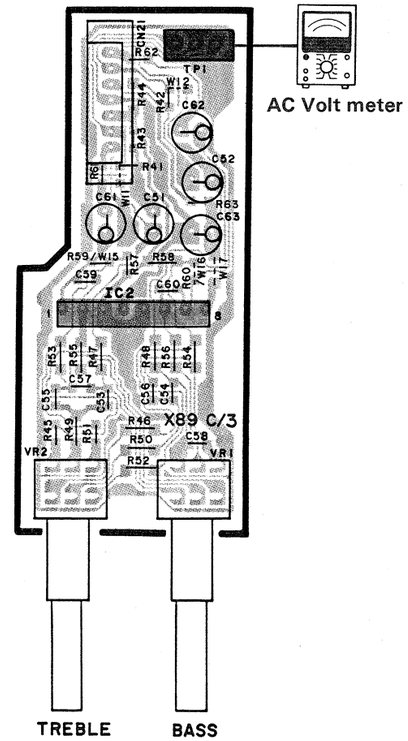


DAUGHTER UNIT (X89-1282-70)





(f) PLAY BACK LEVEL: 300 mV

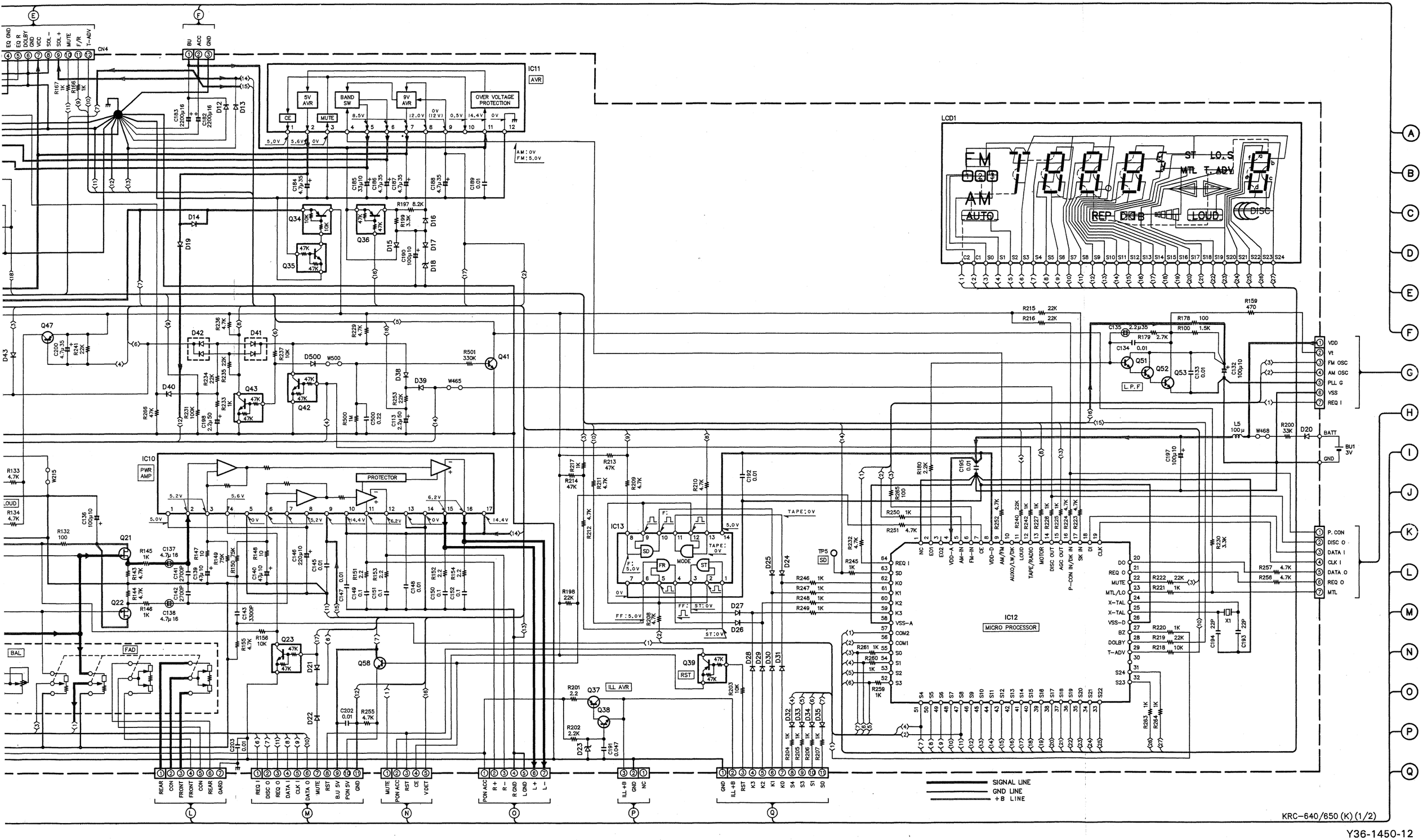


X14-3470-10

Ref. No. IC	Ref. No. Q	Address
	4	4P
	5	5Q
	6	5Q
	7	5Q
	10	4R
	11	4R
	12	3U
	13	2U
	14	2U
	17	4V
	18	5V
	19	5V
	20	5V
	21	4W
	22	3V
	23	1V
	24	3R
	25	5R
	26	4R
	27	5R
	29	4T
	30	4T
	31	4T
	32	4T
	33	5T
	34	3T
	35	3T
	36	3S
	37	6R
	38	6S
	39	6S
	42	3U
	43	4V
	44	5V
	46	6W
	47	4V
	49	2W
	51	5U
	52	5V
	53	5V
	54	4V
	55	4U
	56	3V
	57	4V
	58	2T
1		3Q
2		2P
3		4Q
4		4Q
5		3X
6		2X
7		1X
8		3V
11		3S
12		5U
13		5T
14		5S
15		5S

IC8	: HA12134AF
IC10	: TA8215H
IC11	: BA3906-V1
IC12	: 1723GF-594-38E
IC13	: TC4081BF
Q10~14, 23, 24, 29, 35 42~44, 49	: DTC144EK
Q17~20	: 2SD1757K
Q21, 22	: 2SK433
Q27, 36, 39, 55	: DTA144EK
Q30~32, 38, 41, 51~54, 58	: 2SC2412K
Q34	: DTA114EK
Q37	: 2SB1370
Q46, 47	: 2SA1037K
Q56	: DTC114EK
Q57	: 2SA1428 (O, Y)
D4	: DAP202K
D5, 6, 14~17, 19, 21~27, 38~40, 43, 45, 46	: MA110
D9, 10	: 1S1555
D12, 44	: ERA15-01
D13	: RM10Z
D18	: MA8068-M
D20	: SD184-1
D23	: HZS11B2L
D28~35	: 1SS176
D41, 42	: DAN202K

IC5 : M5280FP
IC6, 7 : NJM4565MD
D3 : RD6.2JS (B2)



KRC-640/650 (K) (1/2)

Y36-1450-12

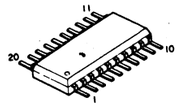
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

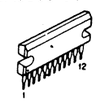
Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

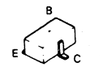
BA3424F



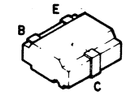
BA3906-V1



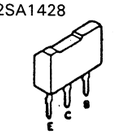
DTA114EK
DTA144EK
DTC114TK
DTC144EK
2SA1037K
2SC2412K
2SD1757K



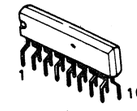
2SC2413K



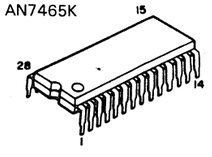
2SA1428



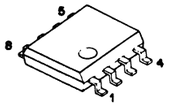
LA1140



AN7465K

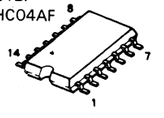


M5280FP
NJM4565MD

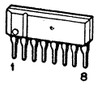


2SK433

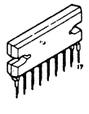
TC4081BF
TC74HC04AF



NJM4565L-D



TA8215H

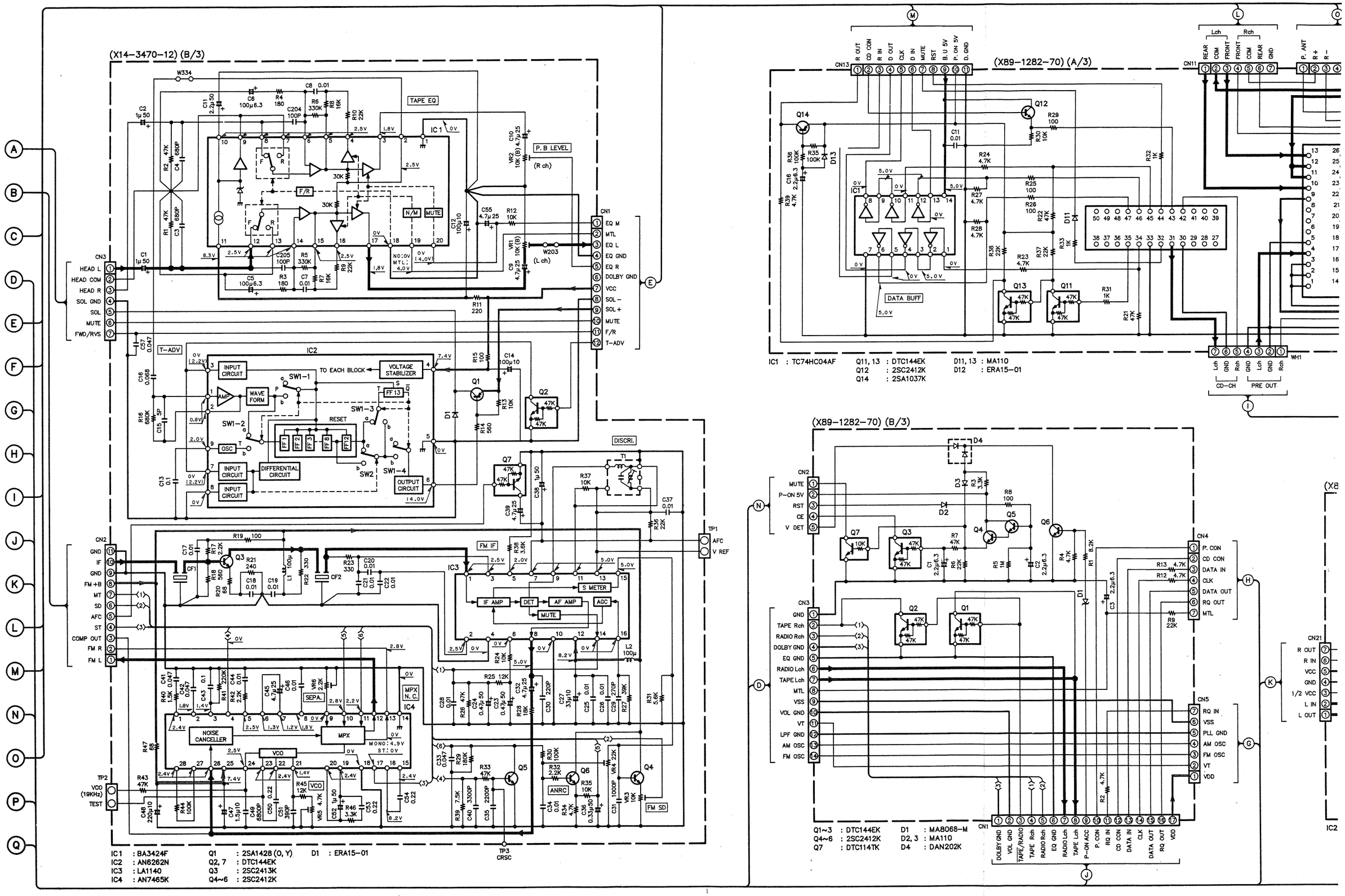


KRC-640/650 (K) (1/2)

Y36-1450-12

KRC-640/650

KENWOOD


(X14-3470-12) (B/3)
CN3
HEAD L
HEAD COM
HEAD R
SOL GND
SOL
MUTE
FWD/RVS
CN1
EQ M
MTL
EQ L
EQ GND
EQ R
DOLBY GND
VCC
SOL −
SOL +
MUTE
F/R
T-ADV
TAPE EQ
IC1
P.B LEVEL
(R ch)
(L ch)
W334
W203
F/R
N/M
MUTE
T-ADV
IC2
INPUT CIRCUIT
WAVE FORM
AMP
TO EACH BLOCK
VOLTAGE STABILIZER
SW1-1
SW1-2
SW1-3
SW1-4
RESET
FF1
FF2
FF3
FF8
FF12
FF13
OSC
DIFFERENTIAL CIRCUIT
OUTPUT CIRCUIT
DISCRI.
T1
Q1
Q2
Q7
CN2
GND
IF
GND
FM +B
MT
SD
AFC
ST
COMP OUT
FM R
FM L
FM IF
IC3
S METER
IF AMP
DET
AF AMP
AGC
MUTE
L1
L2
CF1
CF2
TP1
AFC
V REF
TP2
VCO (19KHz)
TEST
TP3
CRSC
IC4
NOISE CANCELLER
MPX
SEPA.
MPX N.C.
VCO
Q3
Q5
Q6
Q4
ANRC
FM SD
IC1 : BA3424F
IC2 : AN6262N
IC3 : LA1140
IC4 : AN7465K
Q1 : 2SA1428 (O, Y)
Q2, 7 : DTC144EK
Q3 : 2SC2413K
Q4~6 : 2SC2412K
D1 : ERA15-01
(X89-1282-70) (A/3)
CN13
R OUT
CD CON
R IN
D OUT
CLK
D IN
MUTE
RST
B. U 5V
P. ON 5V
D. GND
CN11
Lch
Rch
REAR
COM
FRONT
FRONT
COM
REAR
GND
P. ANT
R+
R−
Q12
Q14
IC1
DATA BUFF
Q13
Q11
WH1
Lch GND
GND Rch
Lch GND
Rch
CD-CH
PRE OUT
IC1 : TC74HC04AF
Q11, 13 : DTC144EK
Q12 : 2SC2412K
Q14 : 2SA1037K
D11, 13 : MA110
D12 : ERA15-01
(X89-1282-70) (B/3)
CN2
MUTE
P-ON 5V
RST
CE
V DET
CN3
GND
TAPE Rch
RADIO Rch
DOLBY GND
EQ GND
RADIO Lch
TAPE Lch
MTL
VSS
VOL GND
VT
LPF GND
AM OSC
FM OSC
CN4
P. CON
CD CON
DATA IN
CLK
DATA OUT
RQ OUT
MTL
CN5
RQ IN
VSS
PLL GND
AM OSC
FM OSC
VT
VDD
CN1
DOLBY GND
VOL GND
TAPE/RADIO
TAPE Rch
RADIO Rch
EQ GND
RADIO Lch
TAPE Lch
P-ON ACC
P. CON
RQ IN
CD CON
DATA IN
CLK
DATA OUT
RQ OUT
VDD
CN21
R OUT
R IN
VCC
GND
1/2 VCC
L IN
L OUT
IC2
Q1~3 : DTC144EK
Q4~6 : 2SC2412K
Q7 : DTC114TK
D1 : MA8068-M
D2, 3 : MA110
D4 : DAN202K

(X89-1282-70) (A/3)

(X89-1282-70) (B/3)

(X89-1282-70) (C/3)

(E30-3929-05)

(X89-1350-11)

(X25-4502-70)

Q11, 13 : DTC144EK
Q12 : 2SC2412K
Q14 : 2SA1037K

D11, 13 : MA110
D12 : ERA15-01

TC144EK
SC2412K
TC114TK

D1 : MA8068-M
D2, 3 : MA110
D4 : DAN202K

IC2 : NJM4565L-D

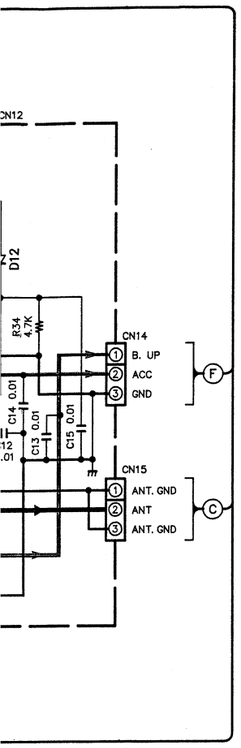
SIGNAL LINE
GND LINE
+B LINE

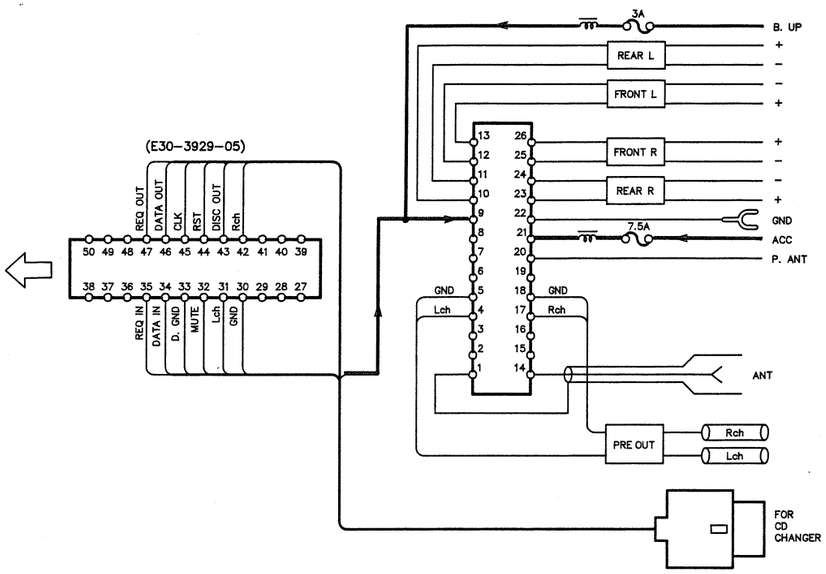
CAUTION: For cor
nents only with ma
parts list). ⚠ Indica
risk of electric shock
shall be carried out
the supply circuit) b
er.

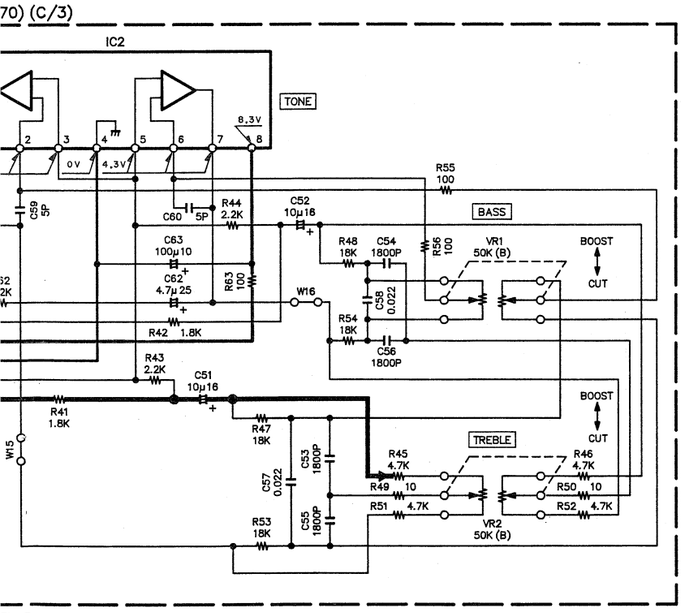
DC voltages are as
ter. Values may var
vidual instruments o

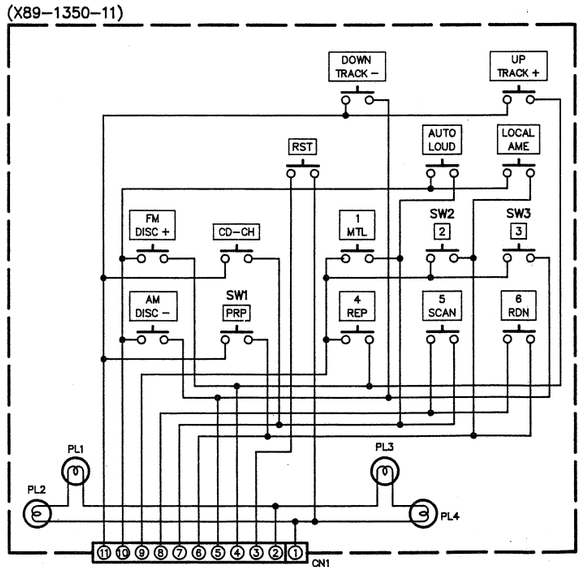
Les tensions c.c. do
haute impédance. L
fait des variations ir
de mesure individue

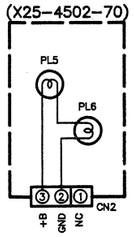
Die angegebenen (
hochohmigen Spar
ken die Meßwerte a
zelnen Instrumenter











SIGNAL LINE
GND LINE
+B LINE

KRC-640/650 (K) (2/2)

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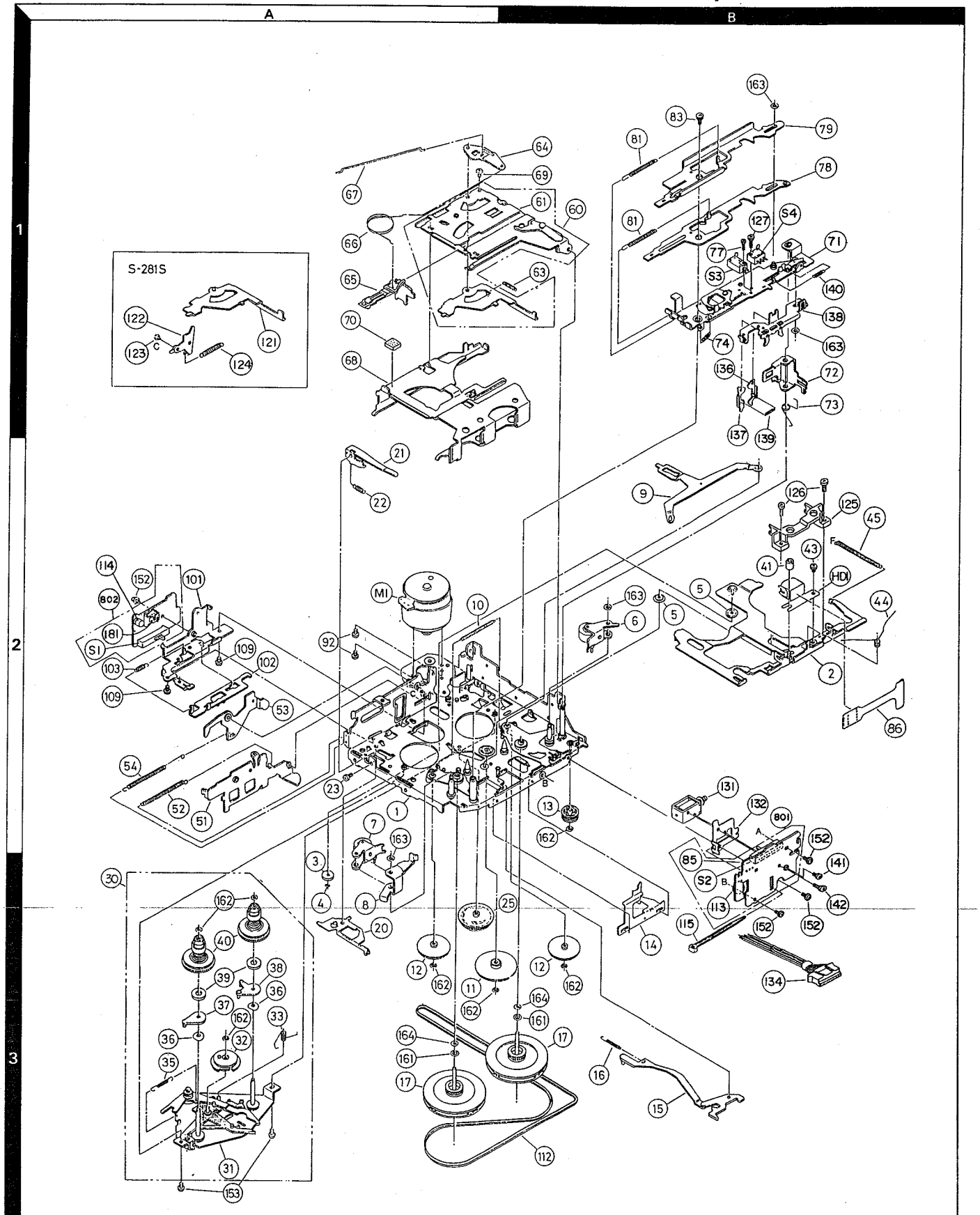
Y36-1450-12

KRC-640/650

KENWOOD

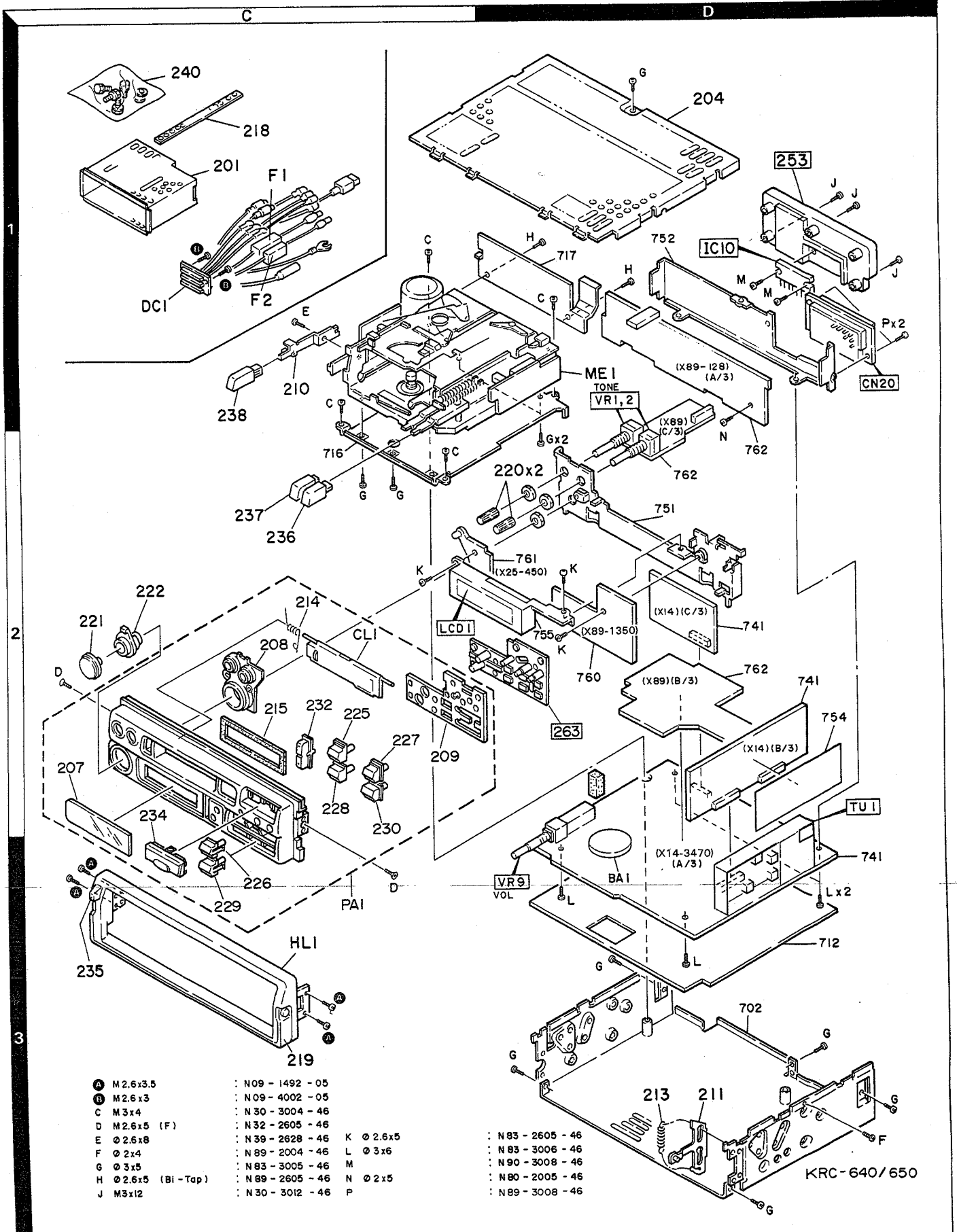
EXPLODED VIEW (MECHANISM)



Parts with the exploded numbers larger than 700 are not supplied.

KRC-640/650

EXPLODED VIEW (UNIT)



A	M2.6x3.5	: N09 - 1492 - 05			
B	M2.6x3	: N09 - 4002 - 05			
C	M3x4	: N30 - 3004 - 46			
D	M2.6x5 (F)	: N32 - 2605 - 46			
E	Ø2.6x8	: N39 - 2628 - 46	K	Ø2.6x5	: N83 - 2605 - 46
F	Ø2x4	: N89 - 2004 - 46	L	Ø3x6	: N83 - 3006 - 46
G	Ø3x5	: N83 - 3005 - 46	M		: N90 - 3008 - 46
H	Ø2.6x5 (Bi-Tap)	: N89 - 2605 - 46	N	Ø2x5	: N80 - 2005 - 46
J	M3x12	: N30 - 3012 - 46	P		: N89 - 3008 - 46

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PARTS LIST

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			KRC-640/650			
201	1C	*	A01-2508-41	METALLIC CABINET		
204	1D	*	A52-0625-22	TOP COVER		
CL1	2C	*	A53-1541-03	CASSETTE LID		
PA1	2C	*	A20-7704-02	PANEL ASSY (KRC-640)	640	
PA1	2C	*	A20-7706-02	PANEL ASSY (KRC-650)	650	
207	2C	*	B10-1424-03	FRONT GLASS (KRC-640)	640	
207	2C	*	B10-1425-03	FRONT GLASS (KRC-650)	650	
208	2C	*	B19-0883-02	LIGHTING BOARD		
209	2C	*	B19-0884-02	LIGHTING BOARD		
-			B46-0100-20	WARRANTY CARD		
-			B46-0172-03	QUESTIONAIRE CARD		
-		*	B64-0125-00	INSTRUCTION MANUAL (KRC-640)	640	
-		*	B64-0126-00	INSTRUCTION MANUAL (KRC-650)	650	
HL1	3C		B07-2014-42	ESCUTCHEON ASSY		
210	1C		D10-2522-14	LEVER		
211	3D		D10-2549-14	LEVER		
ME1	1C		D40-1018-05	CASSETTE MECHANISM ASSY		
DC1	1C		E30-3929-05	CONNECTOR ASSY		
F1			F05-7521-05	FUSE (7.5A, ACC)		
F2			F06-3026-05	FUSE (3A, B.U.)		
213	3D		G01-2040-04	EXTENSION SPRING		
214	2C		G01-2371-04	TORSION COIL SPRING		
215	2C	*	G11-1510-04	CUSHION		
-		*	H01-9309-04	ITEM CARTON CASE (KRC-640)	640	
-		*	H01-9343-04	ITEM CARTON CASE (KRC-650)	650	
-		*	H03-3366-04	OUTER CARTON CASE (KRC-640)	640	
-		*	H03-3404-04	OUTER CARTON CASE (KRC-650)	650	
-			H10-4322-23	POLYSTYRENE FOAMED FIXTURE		
-			H25-0329-04	PROTECTION BAG (280X450X0.03)		
-			H25-0336-04	PROTECTION BAG (170X250X0.03)		
218	1C		J54-0059-04	STAY		
219	3C		K01-0601-03	HANDLE		
220	2D	*	K23-1011-04	KNOB (BASS, TREBLE)		
221	2C	*	K23-1012-03	KNOB (VOL)		
222	2C	*	K23-1013-03	KNOB (FAD)		
225	2C	*	K24-0907-03	KNOB (1)		
226	2C	*	K24-0908-03	KNOB (2)		
227	2C	*	K24-0909-03	KNOB (3)		
228	2C	*	K24-0910-03	KNOB (4)		
229	2C	*	K24-0911-03	KNOB (5)		
230	2C	*	K24-0912-03	KNOB (6)		
232	2C	*	K25-0591-03	KNOB (FM,AM)		
234	2C	*	K25-0592-03	KNOB (TUNE)		
235	3C		K27-3510-04	KNOB (LEVER)		
236	2C	*	K27-3523-04	KNOB (FF)		
237	2C	*	K27-3524-04	KNOB (REW)		
238	1C	*	K27-3525-04	KNOB (EJECT)		
240	1C		N99-0277-05	SCREW SET		
-			N19-2002-05	CORRUGATED WASHER		

E: Scandinavia & Europe K: USA P: Canada W: Europe
U: PX(Far East, Hawaii) T: England M: Other Areas
UE: AAFES(Europe) X: Australia

640: KRC-640
650: KRC-650

⚠ indicates safety critical components.

KRC-640/650

PARTS LIST

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Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格			Destination 仕向	Remarks 備考
-			N32-2008-45	FLAT HEAD MACHIN SCREW				
A	3C		N09-1492-05	MACHINE SCREW (2.6X3.5)				
B	1C		N09-4002-05	STEPPED SCREW (M2.6X3)				
C	1C		N30-3004-46	PAN HEAD MACHIN SCREW				
D	2C		N32-2605-46	FLAT HEAD MACHIN SCREW				
E	1C		N39-2628-46	PAN HEAD MACHIN SCREW				
F	3D		N89-2004-46	BINDING HEAD TAPTITE SCREW				
G	3D		N83-3005-46	PAN HEAD TAPTITE SCREW				
H	1D		N89-2605-46	BINDING HEAD TAPTITE SCREW				
BA1	3D		W09-0726-05	BATTERY				
SYNTHESIZER UNIT (X14-3470-12)								
LCD1	2D	*	B38-0545-05	LIQUID CRYSTAL				
C1 ,2			CE04NW1H010M	ELECTOR	1.0UF	50WV		
C3 ,4			CK73FB1H681K	CHIP C	680PF	K		
C5 ,6			CE04NW0J101M	ELECTRO	100UF	6.3WV		
C7 ,8			CK73FB1H103K	CHIP C	0.010UF	K		
C9 ,10			CE04NW1E4R7M	ELECTRO	4.7UF	25WV		
C11			CE04NW1H2R2M	ELECTRO	2.2UF	50WV		
C12			CE04NW1A101M	ELECTRO	100UF	10WV		
C13			CK73EB1E104K	CHIP C	0.10UF	K		
C14			CE04NW1A101M	ELECTRO	100UF	10WV		
C15			CC73FCH1H050C	CHIP C	5PF	C		
C16			CK73EB1E683K	CHIP C	0.068UF	K		
C17 -22			CK73FB1H103K	CHIP C	0.010UF	K		
C23 ,24			CE04NW1HR47M	ELECTRO	0.47UF	50WV		
C25 ,26			CK73FB1H103K	CHIP C	0.010UF	K		
C27			CE04NW1A330M	ELECTRO	33UF	10WV		
C28			CK73FB1H103K	CHIP C	0.010UF	K		
C29			CK73FB1H271K	CHIP C	270PF	K		
C30			CK73FB1H221K	CHIP C	220PF	K		
C31			CK73FB1H102K	CHIP C	1000PF	K		
C32			CE04NW1E4R7M	ELECTRO	4.7UF	25WV		
C33			CK73EB1H473K	CHIP C	0.047UF	K		
C34			CK73FB1H103K	CHIP C	0.010UF	K		
C35			CK73FB1H222K	CHIP C	2200PF	K		
C36			C92-0502-05	ELECTRO	0.33UF	35WV		
C37			CK73FB1H103K	CHIP C	0.010UF	K		
C38			CE04NW1H010M	ELECTOR	1.0UF	50WV		
C39			CE04NW1E4R7M	ELECTRO	4.7UF	25WV		
C40			CK73FB1H332K	CHIP C	3300PF	K		
C41 ,42			CK73FB1E473KTA	CHIP C	0.047UF	K		
C43			CK73EB1E104K	CHIP C	0.10UF	K		
C44			CK73FB1H103K	CHIP C	0.010UF	K		
C45			CE04NW1E4R7M	ELECTRO	4.7UF	25WV		
C46			CK73FB1H103K	CHIP C	0.010UF	K		
C47			C92-0501-05	CHIP-TAN	1.5UF	6.3WV		
C48			CE04DW1A221M	ELECTRO	220UF	10WV		
C49			CK73FB1H682K	CHIP C	6800PF	K		
C50			C93-0025-05	CERAMIC	0.22UF	K		
C51			CQ92P2A391J	MYLAR	390PF	J		
C52			CK73EB1E104K	CHIP C	0.10UF	K		
C53 ,54			C93-0025-05	CERAMIC	0.22UF	K		
C55			CE04NW1E4R7M	ELECTRO	4.7UF	25WV		

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C57			CK73FB1E473KTA	CHIP C 0.047UF K		
C61 ,62			C90-2554-05	ELECTRO 10UF 16WV		
C63			C90-2546-05	ELECTRO 220UF 6.3WV		
C64 ,65			C90-2550-05	ELECTRO 100UF 10WV		
C66 -70			C90-2554-05	ELECTRO 10UF 16WV		
C71 ,72			C90-2557-05	ELECTRO 2.2UF 50WV		
C73 ,74			C90-2536-05	ELECTRO 10UF 16WV		
C75			C90-2550-05	ELECTRO 100UF 10WV		
C76 ,77			CK73FB1H681K	CHIP C 680PF K		
C101,102			CK73FB1H223KTA	CHIP C 0.022UF K		
C103,104			CK73FB1H182K	CHIP C 1800PF K		
C105-108		*	C90-2608-05	ELECTRO 1.0UF 50WV		
C109,110			C93-0025-05	CERAMIC 0.22UF K		
C111			CE04CW1A101M	ELECTRO 100UF 10WV		
C112			C92-0004-05	ELECTRO 1.0UF 16WV		
C113			C92-0005-05	ELECTRO 2.2UF 6.3WV		
C114			CE04CW0J220M	ELECTRO 22UF 6.3WV		
C126			CE04DW1C101M	ELECTRO 100UF 16WV		
C129,130		*	C90-2606-05	ELECTRO 0.47UF 50WV		
C131			C92-0005-05	ELECTRO 2.2UF 6.3WV		
C132			CE04CW1A101M	ELECTRO 100UF 10WV		
C133,134			CK73FB1H103K	CHIP C 0.010UF K		
C135			C90-2525-05	NP-ELECT 2.2UF 35WV		
C136			CE04CW1A101M	ELECTRO 100UF 10WV		
C137,138			C90-2524-05	NP-ELECT 4.7UF 16WV		
C139,140			CE04CW1A470M	ELECTRO 47UF 10WV		
C141,142			CK73FB1H272K	CHIP C 2700PF K		
C143			CK73FB1H332K	CHIP C 3300PF K		
C145			CK73EB1H103K	CHIP C 0.01UF K		
C146			CE04DW1A221M	ELECTRO 220UF 10WV		
C147,148			CK73FB1H103K	CHIP C 0.010UF K		
C149-152			CK73EB1E104K	CHIP C 0.10UF K		
C154			CE04DW1A102M	ELECTRO 1000UF 10WV		
C155			CK73FB1E473KTA	CHIP C 0.047UF K		
C156			CK73EB1E683K	CHIP C 0.068UF K		
C157			CE04CW1A330M	ELECTRO 33UF 10WV		
C158			CK73FB1H103K	CHIP C 0.010UF K		
C160			CK73FB1H103K	CHIP C 0.010UF K		
C162			CK73EB1E104K	CHIP C 0.10UF K		
C182,183			C90-2537-05	ELECTRO 2200UF 16WV		
C184			CE04CW1V4R7M	ELECTRO 4.7UF 35WV		
C185			CE04CW1A330M	ELECTRO 33UF 10WV		
C186-188			CE04CW1V4R7M	ELECTRO 4.7UF 35WV		
C189			CK73FB1H103K	CHIP C 0.010UF K		
C190			CE04CW1A101M	ELECTRO 100UF 10WV		
C191			CK73EB1H473K	CHIP C 0.047UF K		
C192			CK73FB1H103K	CHIP C 0.010UF K		
C193,194			CC73FCH1H220J	CHIP C 22PF J		
C195			CK73FB1H103K	CHIP C 0.010UF K		
C197			C90-2579-05	ELECTRO 100UF 10WV		
C198			C92-0005-05	ELECTRO 2.2UF 6.3WV		
C199			CE04NW1H2R2M	ELECTRO 2.2UF 50WV		
C200			CE04CW1V4R7M	ELECTRO 4.7UF 35WV		
C202			CK73EB1H103K	CHIP C 0.01UF K		
C203			CK73FB1H103K	CHIP C 0.010UF K		

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C204,205			CC73FCH1H101J	CHIP C 100PF J		
C500			C93-0025-05	CERAMIC 0.22UF K		
253	1D	*	F01-1383-03	HEAT SINK		
LH1			J19-4316-05	HOLDER		
CF1 ,2			L72-0523-05	CERAMIC FILTER		
L1 ,2			L40-1011-17	SMALL FIXED INDUCTOR		
L3 ,4			L40-4791-17	SMALL FIXED INDUCTOR(4.7UH,K)		
L5			L40-1011-17	SMALL FIXED INDUCTOR		
T1			L30-0462-15	FM IFT		
X1			L77-1163-05	CRYSTAL RESONATOR		
J	1D		N30-3012-46	PAN HEAD MACHIN SCREW		
K	2D		N83-2605-46	PAN HEAD TAPTITE SCREW		
L	1D,3D		N83-3006-46	PAN HEAD TAPTITE SCREW		
M	1D		N90-3008-46	TP HEAD MACHINE SCREW		
P	1D		N89-3008-46	BINDING HEAD TAPTITE SCREW		
R1 ,2			RK73FB2A683J	CHIP R 68K J 1/10W		
R3 ,4			RK73EB2B181J	CHIP R 180 J 1/8W		
R5 ,6			RK73FB2A334J	CHIP R 330K J 1/10W		
R7 ,8			RK73FB2A163J	CHIP R 16K J 1/10W		
R9 ,10			RK73FB2A223J	CHIP R 22K J 1/10W		
R11			RK73FB2A220J	CHIP R 22 J 1/10W		
R12			RK73FB2A103J	CHIP R 10K J 1/10W		
R13			RK73EB2B103J	CHIP R 10K J 1/8W		
R14			R92-2018-05	CHIP R 560 J 1/2W		
R15			RK73EB2B101J	CHIP R 100 J 1/8W		
R16			RK73FB2A684J	CHIP R 680K J 1/10W		
R17			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R18			RK73FB2A561J	CHIP R 560 J 1/10W		
R19			RK73EB2B101J	CHIP R 100 J 1/8W		
R20			RK73FB2A680J	CHIP R 68 J 1/10W		
R21			RK73FB2A241J	CHIP R 240 J 1/10W		
R22 ,23			RK73FB2A331J	CHIP R 330 J 1/10W		
R24			RK73FB2A103J	CHIP R 10K J 1/10W		
R25			RK73FB2A123J	CHIP R 12K J 1/10W		
R26			RK73FB2A473J	CHIP R 47K J 1/10W		
R27			RK73FB2A393J	CHIP R 39K J 1/10W		
R28			RK73FB2A183J	CHIP R 18K J 1/10W		
R29			RK73FB2A184J	CHIP R 180K J 1/10W		
R30			RK73FB2A104J	CHIP R 100K J 1/10W		
R31			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R32			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R33			RK73FB2A473J	CHIP R 47K J 1/10W		
R34			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R35			RK73FB2A103J	CHIP R 10K J 1/10W		
R36			RK73FB2A223J	CHIP R 22K J 1/10W		
R37			RK73FB2A103J	CHIP R 10K J 1/10W		
R38			RK73FB2A362J	CHIP R 3.6K J 1/10W		
R39			RK73FB2A752J	CHIP R 7.5K J 1/10W		
R40			RK73FB2A152J	CHIP R 1.5K J 1/10W		
R41			RK73FB2A224J	CHIP R 220K J 1/10W		
R42			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R43			RK73FB2A473J	CHIP R 47K J 1/10W		

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R44			RK73FB2A104J	CHIP R 100K J 1/10W		
R45			RK73FB2A123J	CHIP R 12K J 1/10W		
R46			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R47			RK73FB2A680J	CHIP R 68 J 1/10W		
R61 ,62			RK73FB2A912J	CHIP R 9.1K J 1/10W		
R63 ,64			RK73FB2A473J	CHIP R 47K J 1/10W		
R65 ,66			RK73FB2A512J	CHIP R 5.1K J 1/10W		
R67			RK73EB2B432J	CHIP R 4.3K J 1/8W		
R68			RK73FB2A432J	CHIP R 4.3K J 1/10W		
R69 ,70			RK73FB2A183J	CHIP R 18K J 1/10W		
R71			RK73FB2A101J	CHIP R 100 J 1/10W		
R73			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R74			RK73FB2A203J	CHIP R 20K J 1/10W		
R75 ,76			RK73FB2A103J	CHIP R 10K J 1/10W		
R77			RK73FB2A203J	CHIP R 20K J 1/10W		
R78			RK73FB2A221J	CHIP R 220 J 1/10W		
R79 ,80			RK73FB2A473J	CHIP R 47K J 1/10W		
R81 ,82			RK73FB2A122J	CHIP R 1.2K J 1/10W		
R83 ,84			RK73FB2A752J	CHIP R 7.5K J 1/10W		
R85 ,86			RK73FB2A101J	CHIP R 100 J 1/10W		
R87 ,88			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R100			RK73FB2A152J	CHIP R 1.5K J 1/10W		
R101,102			RK73FB2A393J	CHIP R 39K J 1/10W		
R103			RK73EB2B472J	CHIP R 4.7K J 1/8W		
R104			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R105			RK73FB2A180J	CHIP R 18 J 1/10W		
R106			RK73EB2B183J	CHIP R 18K J 1/8W		
R107			RK73EB2B223J	CHIP R 22K J 1/8W		
R132			RK73FB2A101J	CHIP R 100 J 1/10W		
R133-136			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R137,138			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R141			R92-0365-05	CHIP R 1K J 1/2W		
R142			RK73FB2A103J	CHIP R 10K J 1/10W		
R143,144			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R145,146			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R147,148			RK73EB2B100J	CHIP R 10 J 1/8W		
R149,150			RK73EB2B753J	CHIP R 75K J 1/8W		
R151-154			RK73EB2B2R2J	CHIP R 2.2 J 1/8W		
R155			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R156			RK73FB2A103J	CHIP R 10K J 1/10W		
R157			RK73EB2B180J	CHIP R 18 J 1/8W		
R158			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R159			RK73FB2A471J	CHIP R 470 J 1/10W		
R160			RK73FB2A473J	CHIP R 47K J 1/10W		
R161			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R162			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R163			RK73FB2A333J	CHIP R 33K J 1/10W		
R164			RK73FB2A393J	CHIP R 39K J 1/10W		
R165			RK73EB2B180J	CHIP R 18 J 1/8W		
R166,167			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R168			RK73FB2A223J	CHIP R 22K J 1/10W		
R169			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R171,172			RK73FB2A103J	CHIP R 10K J 1/10W		
R175-177			RK73FB2A473J	CHIP R 47K J 1/10W		
R178			RK73FB2A101J	CHIP R 100 J 1/10W		

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R179			RK73FB2A272J	CHIP R 2.7K J 1/10W		
R180			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R196			RK73FB2A103J	CHIP R 10K J 1/10W		
R197			RK73FB2A822J	CHIP R 8.2K J 1/10W		
R198			RK73FB2A223J	CHIP R 22K J 1/10W		
R199			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R201			R92-2021-05	CHIP R 2.2 J 1/2W		
R202			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R203			RK73FB2A103J	CHIP R 10K J 1/10W		
R204-207			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R208-212			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R213,214			RK73FB2A473J	CHIP R 47K J 1/10W		
R215,216			RK73FB2A223J	CHIP R 22K J 1/10W		
R217			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R218			RK73FB2A103J	CHIP R 10K J 1/10W		
R219			RK73FB2A223J	CHIP R 22K J 1/10W		
R220,221			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R222			RK73FB2A223J	CHIP R 22K J 1/10W		
R223,224			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R225			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R226			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R227			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R229			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R230			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R231			RK73FB2A104J	CHIP R 100K J 1/10W		
R232			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R233			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R234,235			RK73FB2A223J	CHIP R 22K J 1/10W		
R236			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R237,238			RK73FB2A103J	CHIP R 10K J 1/10W		
R239			RK73FB2A473J	CHIP R 47K J 1/10W		
R240,241			RK73FB2A223J	CHIP R 22K J 1/10W		
R242			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R245-250			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R251,252			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R253			RK73FB2A223J	CHIP R 22K J 1/10W		
R254			RK73FB2A220J	CHIP R 22 J 1/10W		
R255-257			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R259-261			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R262			RK73FB2A473J	CHIP R 47K J 1/10W		
R263,264			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R265			RK73FB2A101J	CHIP R 100 J 1/10W		
R266			RK73EB2B473J	CHIP R 47K J 1/8W		
R500			RK73FB2A105J	CHIP R 1.0M J 1/10W		
R501			RK73FB2A334J	CHIP R 330K J 1/10W		
VR1 -3			R12-3127-05	TRIMMING POT.(10Kタテ)		
VR4			R12-3129-05	TRIMMING POT.(22Kタテ)		
VR5			R12-1090-05	TRIMMING POT.(4.7Kタテ)		
VR6			R12-1086-05	TRIMMING POT.(2.2Kタテ)		
VR7			R12-3685-05	TRIMMING POT.(10K ヲセ)		
VR9			R24-3646-05	POTENTIOMETER(80X1,20KX3)		
W1 -47			R92-2053-05	CHIP R 0 J 1/8W		
W49 -65			R92-2053-05	CHIP R 0 J 1/8W		
W68 ,69			R92-2053-05	CHIP R 0 J 1/8W		
W81 -92			R92-2052-05	CHIP R 0 J 1/10W		

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W94 -101			R92-2052-05	CHIP R 0 J 1/10W		
W103-107			R92-2052-05	CHIP R 0 J 1/10W		
W108			R92-2053-05	CHIP R 0 J 1/8W		
W109,110			R92-2052-05	CHIP R 0 J 1/10W		
W112-114			R92-2052-05	CHIP R 0 J 1/10W		
W120			R92-2052-05	CHIP R 0 J 1/10W		
W203			R92-2053-05	CHIP R 0 J 1/8W		
W204,205			R92-2052-05	CHIP R 0 J 1/10W		
W215			R92-2052-05	CHIP R 0 J 1/10W		
W223,224			R92-2053-05	CHIP R 0 J 1/8W		
W500			R92-2053-05	CHIP R 0 J 1/8W		
D1			ERA15-01	DIODE		
D3			RD6.2JS(B2)	ZENER DIODE		
D4			DAP202K	DIODE		
D5 ,6			MA110	DIODE		
D5 ,6			1SS355	DIODE		
D9 ,10			1S1555	DIODE		
D12			ERA15-01	DIODE		
D13			RM10Z	DIODE		
D14 -17			MA110	DIODE		
D14 -17			1SS355	DIODE		
D18			MA8068-M	ZENER DIODE		
D19			MA110	DIODE		
D19			1SS355	DIODE		
D20			SD184-1	DIODE		
D21 ,22			MA110	DIODE		
D21 ,22			1SS355	DIODE		
D23			HZS11B2L	ZENER DIODE		
D24 -27			MA110	DIODE		
D24 -27			1SS355	DIODE		
D28 -35			1SS176	DIODE		
D38 -40			MA110	DIODE		
D38 -40			1SS355	DIODE		
D41 ,42			DAN202K	DIODE		
D43			MA110	DIODE		
D43			1SS355	DIODE		
D44			ERA15-01	DIODE		
D45 ,46			MA110	DIODE		
D45 ,46			1SS355	DIODE		
D500			MA110	DIODE		
D500			1SS355	DIODE		
IC1			BA3424F	IC		
IC2			AN6262N	IC(T.ADV)		
IC3			LA1140	IC(FM IF/DETECTION)		
IC4			AN7465K	IC		
IC5			M5280FP	IC		
IC6 ,7			NJM4565MD	IC(OP AMP X2)		
IC8			HA12134AF	IC		
IC10			TA8215H	IC		
IC11			BA3906-V1	IC		
IC12		*	1723GF-594-3BE	IC		
IC13			TC4081BF	IC(AND X4)		
Q1			2SA1428(O,Y)	TRANSISTOR		
Q2			DTC144EK	DIGITAL TRANSISTOR		

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Q3			2SC2413K	TRANSISTOR		
Q4 -6			2SC2412K	TRANSISTOR		
Q7			DTC144EK	DIGITAL TRANSISTOR		
Q10 -14			DTC144EK	DIGITAL TRANSISTOR		
Q17 -20			2SD1757K	TRANSISTOR		
Q21 ,22			2SK433	FET		
Q23 ,24			DTC144EK	DIGITAL TRANSISTOR		
Q27			DTA144EK	DIGITAL TRANSISTOR		
Q29			DTC144EK	DIGITAL TRANSISTOR		
Q30 -32			2SC2412K	TRANSISTOR		
Q34			DTA114EK	DIGITAL TRANSISTOR		
Q35			DTC144EK	DIGITAL TRANSISTOR		
Q36			DTA144EK	DIGITAL TRANSISTOR		
Q37			2SB1370	TRANSISTOR		
Q38			2SC2412K	TRANSISTOR		
Q39			DTA144EK	DIGITAL TRANSISTOR		
Q41			2SC2412K	TRANSISTOR		
Q42 -44			DTC144EK	DIGITAL TRANSISTOR		
Q46 ,47			2SA1037K	TRANSISTOR		
Q49			DTC144EK	DIGITAL TRANSISTOR		
Q51 -54			2SC2412K	TRANSISTOR		
Q55			DTA144EK	DIGITAL TRANSISTOR		
Q56			DTC114EK	DIGITAL TRANSISTOR		
Q57			2SA1428(O,Y)	TRANSISTOR		
Q58			2SC2412K	TRANSISTOR		
TU1	3D		W02-1281-05	TUNER ASSY		
SUB CIRCUIT UNIT (X25-4502-70)						
PL5			B30-1346-05	LAMP (5.5V.125A AMB)		
PL6			B30-1350-05	LAMP (5.5V,125MA)		
DAUGHTER UNIT (X89-1282-70)						
C1 -3			C92-0005-05	ELECTRO 2.2UF 6.3WV		
C11 ,12			CK73EB1H103K	CHIP C 0.01UF K		
C13 -15			CK73FB1H103K	CHIP C 0.010UF K		
C16			C92-0005-05	ELECTRO 2.2UF 6.3WV		
C51 ,52			CE04DW1C100M	ELECTRO 10UF 16WV		
C53 -56			CK73FB1H182K	CHIP C 1800PF K		
C57 ,58			CK73FB1H223KTA	CHIP C 0.022UF K		
C59 ,60			CC73FCH1H050C	CHIP C 5PF C		
C61 ,62			CE04DW1E4R7M	ELECTRO 4.7UF 25WV		
C63			CE04DW1A101M	ELECTRO 100UF 10WV		
CN20			E08-4001-05	RECTANGULAR RECEPTACLE		
N	1D		N80-2005-46	PAN HEAD TAPTITE SCREW		
R1			RK73FB2A822J	CHIP R 8.2K J 1/10W		
R2			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R3			RK73EB2B332J	CHIP R 3.3K J 1/8W		
R4			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R5			RK73FB2A105J	CHIP R 1.0M J 1/10W		
R6			RK73FB2A223J	CHIP R 22K J 1/10W		
R7			RK73FB2A473J	CHIP R 47K J 1/10W		
R8			RK73EB2B101J	CHIP R 100 J 1/8W		
R9			RK73FB2A223J	CHIP R 22K J 1/10W		
R12 ,13			RK73FB2A472J	CHIP R 4.7K J 1/10W		

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R21			RK73FB2A473J	CHIP R 47K J 1/10W		
R22			RK73EB2B473J	CHIP R 47K J 1/8W		
R23			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R24			RK73EB2B472J	CHIP R 4.7K J 1/8W		
R25 ,26			RK73FB2A101J	CHIP R 100 J 1/10W		
R27 ,28			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R29			RK73FB2A101J	CHIP R 100 J 1/10W		
R30			RK73EB2B103J	CHIP R 10K J 1/8W		
R31 -33			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R34			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R35 ,36			RK73FB2A104J	CHIP R 100K J 1/10W		
R37 ,38			RK73FB2A223J	CHIP R 22K J 1/10W		
R41 ,42			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R43			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R44			RK73EB2B222J	CHIP R 2.2K J 1/8W		
R45			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R46			RK73EB2B472J	CHIP R 4.7K J 1/8W		
R47 ,48			RK73EB2B183J	CHIP R 18K J 1/8W		
R49 ,50			RK73EB2B100J	CHIP R 10 J 1/8W		
R51			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R52			RK73EB2B472J	CHIP R 4.7K J 1/8W		
R53 ,54			RK73EB2B183J	CHIP R 18K J 1/8W		
R55 ,56			RK73EB2B101J	CHIP R 100 J 1/8W		
R61 ,62			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R63			RK73FB2A101J	CHIP R 100 J 1/10W		
VR1 ,2			R10-4031-15	POTENTIOMETER		
W1			R92-2052-05	CHIP R 0 J 1/10W		
W3 ,4			R92-2052-05	CHIP R 0 J 1/10W		
W5 ,6			R92-2053-05	CHIP R 0 J 1/8W		
W7 ,8			R92-2052-05	CHIP R 0 J 1/10W		
W15 ,16			R92-2052-05	CHIP R 0 J 1/10W		
W17			R92-2053-05	CHIP R 0 J 1/8W		
W21			R92-2052-05	CHIP R 0 J 1/10W		
W22 -31			R92-2053-05	CHIP R 0 J 1/8W		
D1			MA8068-M	ZENER DIODE		
D2 ,3			MA110	DIODE		
D2 ,3			1SS355	DIODE		
D4			DAN202K	DIODE		
D11			MA110	DIODE		
D11			1SS355	DIODE		
D12			ERA15-01	DIODE		
D13			MA110	DIODE		
D13			1SS355	DIODE		
IC1			TC74HC04AF	IC(INVERTER)		
IC2			NJM4565L-D	IC(OP AMP X2)		
Q1 -3			DTC144EK	DIGITAL TRANSISTOR		
Q4 -6			2SC2412K	TRANSISTOR		
Q7			DTC114TK	DIGITAL TRANSISTOR		
Q11			DTC144EK	DIGITAL TRANSISTOR		
Q12			2SC2412K	TRANSISTOR		
Q13			DTC144EK	DIGITAL TRANSISTOR		
Q14			2SA1037K	TRANSISTOR		
DAUGHTER UNIT (X89-1350-11)						
PL1 -4			B30-1305-05	LAMP (5.5V .125A)		

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CASSETTE MECHANISM UNIT (D40-1018-05)						
1	2A		A10-2089-08	CHASSIS CALKED ASSY		
2	2B		J21-7207-08	MOUNTING HARDWARE		
3	3A		D14-0616-08	ROLLER A		
4	3A		N24-3012-41	E TYPE RETAINING RING		
5	2B		D14-0617-08	ROLLER B		
6	2B		D14-0618-08	PINCH ROLLER F		
7	2A		D14-0619-08	PINCH ROLLER R		
8	3A		D10-2666-08	LEVER (FR CAM)		
9	2B		D10-2667-08	LEVER (PROGRAM)		
10	2A		G01-2560-08	TENSION SPRING		
11	3A		D13-1079-08	GEAR (IDLE)		
12	3A, 3B		D13-1081-08	GEAR (TAKE UP)		
13	2B		D15-0908-08	PULLEY		
14	3B		D10-2668-08	LEVER		
15	3B		D10-2679-08	LEVER		
16	3B		G01-2557-08	TENSION SPRING		
17	3A, 3B		D01-0603-08	FLYWHEEL		
20	3A		D10-2669-08	LEVER		
21	2A		D10-2670-08	LEVER (LOCK)		
22	2A		G01-2218-08	TENSION SPRING		
23	2A		N84-2004-45	SCREW (M2X4)		
25	3B		D13-1078-08	GEAR		
30	3A		A11-0848-08	SUB CHASSIS ASSY		
31	3A		A11-0847-08	SUB CHASSIS ASSY		
32	3A		D13-1077-08	GEAR (SWITCHING)		
33	3A		G01-2563-08	TORSION SPRING		
35	3A		G01-2579-18	TENSION SPRING		
36	3A		G02-0473-08	FLAT SPRING		
37	3A		D10-2645-18	LEVER		
38	3A		D10-2671-18	LEVER		
39	3A		G10-1012-08	FELT		
40	3A		D03-0305-08	REEL DISK		
41	2B		N14-0701-08	NUT		
43	2B		N30-2004-46	SCREW (M2X4)		
44	2B		G01-2573-08	TORSION SPRING		
45	2B		G01-2571-08	TENSION SPRING		
51	2A		D10-2672-08	LEVER (EJECT)		
52	2A		G01-2216-08	TENSION SPRING		
53	2A		D10-2673-08	ACTION ARM		
54	2A		G01-2217-08	TENSION SPRING		
60	1B		J19-4387-08	HOLDER		
61	1B		J19-4380-08	HOLDER		
63	1B		G01-2212-08	TENSION SPRING		
64	1B		D10-2130-08	LEVER (INV)		
65	1A		J90-0610-08	CASSETTE GUIDE		
66	1A		G01-2225-08	TORSION SPRING		
67	1A		G09-0093-08	SPRING		
68	1A		J19-2990-08	HOLDER		
69	1B		N39-2004-08	SCREW (M2X4)		
70	1A		G11-1065-08	CUSHION		
71	1B		J21-7252-08	MOUNTING HARDWARE		
72	1B		D10-2674-08	LEVER (RELEASE)		
73	1B		G01-2574-08	TORSION SPRING		

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74	1B		G01-2556-08	TENSION SPRING		
77	1B		N39-1706-45	SCREW (M1.7X6)		
78	1B		D10-2675-08	LEVER (REW)		
79	1B		D10-2676-08	LEVER (FF)		
81	1B		G01-2572-08	TENSION SPRING		
83	1B		N09-4039-08	SCREW		
85	2B		J74-0081-08	PRINTED WIRING BOARD		
86	2B		J84-0009-08	PRINTED WIRING BOARD (FPC)		
92	2A		N39-2002-46	SCREW (M2X2)		
101	2A		J21-7205-08	MOUNTING HARDWARE		
102	2A		D10-2664-08	LEVER		
103	2A		G01-2567-08	TENSION SPRING		
109	2A		N30-2003-08	SCREW (M2X3)		
112	3B		D16-0605-08	BELT		
113	3A		C91-0692-05	CERAMIC 0.047UF M		
115	3B		J61-0081-05	WIRE BAND		
121	1A		D10-2658-08	ARM		
122	1A		D10-2678-08	LEVER		
123	1A		J12-0647-08	PIN		
124	1A		G01-2562-08	TORSION SPRING		
125	2B		J90-0722-08	CASSETTE GUIDE		
126	2B		N09-4009-08	SCREW (M2X5)		
127	1B		N35-2006-46	SCREW (M2.6X6)		
131	2B		T94-0405-08	SOLENOID		
132	2B		J21-7251-08	MOUNTING HARDWARE		
134	3B		E31-8188-05	CONNECTING WIRE		
136	1B		D10-2685-08	LEVER		
137	1B		D10-2686-08	LEVER		
138	1B		D10-2687-08	LEVER		
139	1B		G01-2577-08	TENSION SP		
140	1B		G01-2578-08	TENSION SP		
141	3B		N39-2002-46	PAN HEAD MACHINE SCREW		
142	3B		N39-2003-46	PAN HEAD MACHINE SCREW		
152	2A, 2B		N90-2003-46	SCREW (M2X3)		
153	3A		N30-2603-46	SCREW (M2.6X3)		
161	3A, 3B		N19-1144-08	FLAT WASHER		
162	2B, 3A		N19-1134-08	FLAT WASHER		
163	2A, 2B		N19-1135-08	FLAT WASHER		
164	3A, 3B		N19-1137-08	FLAT WASHER		
181	2A		E40-9127-05	PIN CONNECTOR		
HD1	2B		T31-0205-08	PLAYBACK HEAD		
M1	2A		T42-0716-08	DC MOTOR ASSY		
S1	2A		S31-3633-08	SLIDE SWITCH		
S2	2B		S31-3634-08	SLIDE SWITCH		
S3	1B		S46-1606-08	LEAF SWITCH		
S4	1B		S46-1607-08	LEAF SWITCH		

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SPECIFICATIONS

Specifications subject to change without notice.

FM Tuner Section

Frequency Range (200kHz space)	87.9MHz – 107.9MHz
(50kHz space)	87.5MHz – 108.0MHz
Usable Sensitivity	12.0dBf (1.1 μV/75ohms)
50dB Quieting Sensitivity	15.2dBf (1.6 μV/75ohms)
Frequency Response (± 3dB)	30Hz – 15kHz
Signal to Noise Ratio	73dB
Selectivity	100dB
Capture Ratio	1.5dB
Image Response Ratio	70dB
IF Response Ratio	120dB
Stereo Separation (1kHz)	40dB

AM Tuner Section

Frequency Range (10kHz space)	530kHz – 1700kHz
(9kHz space)	531kHz – 1611kHz
Usable Sensitivity	28dB (30 μV)

Cassette Desk Section

Tape Speed	4.76cm/sec.
Wow & Flutter (WRMS)	0.12% (WRMS)
Fast Winding Time (C – 60)	100sec.
Frequency Response (120 μs)	30Hz – 14kHz (± 3dB)
(70 μs)	30Hz – 16kHz (± 3dB)
Stereo Separation (1kHz)	43dB
Signal to Noise Ratio (Dolby NR OFF)	54dB
(Dolby-B NR ON)	63dB

Audio Section

Maximum Output Power	25W × 2
Output Power (10% THD, 1kHz, 4ohms)	20W × 2
(1% THD, 30Hz – 20kHz, 4ohms)	15W × 2
Tone Action	Bass : 100Hz ± 10dB
	Treble : 10kHz ± 10dB
Preout level/load	1000mV (MAX.)/10kohms

General

Operating Voltage	14.4V (11 – 16V allowable)
Current Consumption	6A at Rated Power
Installation Size (W × H × D)	182 × 52 × 159mm
	(7-3/16 × 2-1/16 × 6-1/4 in.)
Weight	2.0kg (4.4lb)

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For this reason specifications may be changed without notice.
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Pour cette raison, les spécifications sont sujettes à modifications sans préavis.
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Le système de réduction du bruit de fond est fabriqué sous license des Dolby Laboratories.

KENWOOD strebt ständige Verbesserungen in der Entwicklung an.
Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.
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Note :

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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